

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 244.—Vol. X.]

LONDON: SATURDAY, APRIL 25, 1840.

[PRICE 6D.]

### PUBLIC COMPANIES.

#### MEETINGS.

**ANGLO-MEXICAN MINT COMPANY.**—The ANNUAL GENERAL MEETING of proprietors of shares in this company will be held at the office, on Tuesday, the 5th of May next. The chair will be taken at One o'clock punctually. At this meeting one director will be elected in the place of John South, Esq., who goes out by rotation, and is eligible to be re-elected. Office, 9, New Broad-street, London, April 17. G. B. LONSDALE, Sec.

**BRITISH SILVER-LEAD AND COPPER MINING COMPANY.**—Notice is hereby given, that the ANNUAL GENERAL MEETING of the British Silver-Lead and Copper Mining Company will take place at the Clarendon-rooms, South John-street, Liverpool, on Friday, the 5th day of May next, at Twelve o'clock at noon. By order of the directors, Company's office, Brazil-buildings, Drury-lane, R. SHERATON, Sec.

**COPIAPO MINING COMPANY.**—Notice is hereby given, that, in conformity with the rules of the company, a SPECIAL MEETING of the shareholders will be held at their office, on Thursday, the 30th instant, at One o'clock precisely, for the election of two directors and one auditor, in the place of Thomas Richardson, Robert Scott, and John Shore, Esqrs., who go out by rotation, but who will be eligible to be immediately re-elected. 22, Austin-friars, April 14. FRED. GRELLET, Secretary.

**POLBREEN TIN AND COPPER MINING COMPANY.**—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be held on Wednesday, the 4th of May, at One o'clock precisely, at St. Mildred's-court, London, April 16.

**WHEEL WALLIS MINING COMPANY.**—Notice is hereby given, that the ANNUAL MEETING of the shareholders in this Mine will be held at the Guildhall Coffee-house, London, on Wednesday, the 6th day of May next, at Ten o'clock in the morning; and an ADJOURNED MEETING will be held at the Mining Office, 15, St. Ann's-square, Manchester, on Thursday, the 4th day of June next, at Three o'clock in the afternoon. By order of the directors, 15, St. Ann's-square, Manchester, April 10. HENRY CARR, Sec.

**WEST WHEEL JEWEL MINING ASSOCIATION.**—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be held at the company's office, on Monday, the 11th of May next, at Twelve o'clock precisely. By order of the board, 21, Threadneedle-street, April 22. ROWLAND NICHOLSON, Sec.

**WEST CORNWALL MINES INVESTMENT COMPANY.**—The FOURTH ANNUAL GENERAL MEETING of the proprietors of this company will be held at the George and Vulture Tavern, St. Michael's-alley, London, on Wednesday, the 13th day of May next, at Twelve o'clock precisely. And notice is hereby given, that every proprietor intending to become a candidate, or to propose some other proprietor, duly qualified, for the office of director or auditor, must, within seven days from the date hereof, signify, by some writing under his hand, to be left within the same seven days at the office of the company in London, either his intention to become a candidate, or the name and place of abode of the candidate to be proposed by him or her. By order of the directors, Dated April 24. GEORGE PYE, Secretary.

**NATIONAL PROVINCIAL BANK OF ENGLAND.**—The directors of the National Provincial Bank of England do hereby give notice, that the ANNUAL GENERAL MEETING of the proprietors of the society will be held on Thursday, the 14th day of May next, at the hour of Twelve precisely, at the company's office, No. 112, Bishopsgate-street, within, in the city of London. The chair to be taken at Twelve o'clock precisely (not Twelve for One o'clock). By order of the court of directors, April 16. DANIEL ROBERTSON, Agent and Manager.

#### CALLS.

**BRITISH SILVER-LEAD AND COPPER MINING COMPANY.**—The directors of the British Silver-Lead and Copper Mining Company do hereby give notice, that they have this day made a CALL of FOUR POUNDS per share on the new shares (equal to One Pound per share on the old shares) in the above company, payable on or before the 3rd day of April next, at the Liverpool Banking Company, South Castle-street, Liverpool, or at Messrs Currie and Co., bankers, London, on their account. R. SHERATON, Sec. Company's office, Brazil-buildings, Drury-lane, Liverpool, March 24.

**BRISTOL AND EXETER RAILWAY.**—CALL OF TEN POUNDS PER SHARE, being the ninth instalment, and making, with former calls, the sum of £30 per share.—The directors of this company, under the provisions of the Act of Incorporation, hereby give notice, that the proprietors of shares are required to pay, on or before the 6th day of May next, at any of the under-mentioned banks, the sum of £10 on each of their respective shares, viz.:—London—Messrs. Glyn, Hallifax, Mills, and Co. Liverpool—The Bank of Liverpool. Manchester—The South Lancashire Bank, and Messrs. Jones Loyd and Co. Bristol—Messrs. Miles, Hanford, and Co.; Messrs. Baillies, Ames, and Co.; Messrs. Stuckey and Co.'s banking company, or at either of their branches; the West of England and South Wales District Bank, or at either of its branches; and the National Provincial Bank of England.

Exeter—Messrs. Sanders, Sons, and Co.; Messrs. Cole, Holroyd, and Co.; the Devon and Cornwall Banking Company; Messrs. Milford and Co.; and the West of England and South Wales District Bank, or at either of its branches. The bankers are instructed to charge interest at the rate of 5 per cent. per annum on all arrears. FREDERICK RICKETTS, Chairman. Office, 30, Broad-street, Bristol, April 3, 1840. Interest at the rate of 5 per cent. per annum will be allowed on payments in anticipation of calls.

**SAVING OF FIFTY PER CENT. IN FUEL.—PATENTS** have been secured throughout Europe and America for a simple MACHINE (that is applicable to any stationary Steam Engine) which will effect the above-mentioned economy. Coke being first made, and afterwards consumed, £1000 is required by the inventor to bring the invention properly before the public, and for which sum the patentee would sell the third of the advantages. For licenses and other information, apply (free) to Mr. J. E. Poddick, 6, John-street, Adelphi.

**BITUMINOUS AND STEAM-PACKET COAL, of SUPERIOR QUALITY.**—A GENTLEMAN, possessing a considerable estate, abounding in this valuable fuel, is desirous of finding a PARTY DISPOSED TO JOIN HIM IN OPENING THE MINERALS. He is willing to embark a capital equal to one-third of the outlay, and the quality and quantity of the coal will insure a large and profitable trade for a long period of years, the property being fully capable of delivering 60,000 tons annually, and the supply of this description of coal is by no means equal to the demand.—For particulars apply to William Brough and Son, Mining Engineers, Neath, Glamorganshire.

**BROOKMAN AND LANGDON'S ORIGINAL DRAWING PENCILS.**—SIXPENCE EACH.—The public are respectfully informed, that these superior articles, manufactured on the principles which have acquired for them such extensive patronage, particularly during the last fifty years, may be procured of all respectable stationers in London and the country, at the above mentioned price. The division into different degrees of hardness adapted to the various purposes to which pencils are applied, and appropriately distinguished by letters marked at the end, viz.—H (hard), H H (engineering, very hard), H H H (darker, extremely hard), H B (hard and black), B (black for shade), B B (very black for ditto), F (fine drawing medium degree), an invention which proceeded, in the first instance, from their house, though now universally adopted, is still confined by them, B and L also make drawing pencils, distributed (like their best pencils) into seven degrees of hardness; these pencils, which bear the words second quality impressed on each, are sold at half the price of the former; they are confidently recommended as very superior articles, being entirely free from those silicious, or rather adamantine particles which, unfortunately for reasons which cannot be explained in the compass of an advertisement, it is now impossible entirely to avoid in the others, though, from the expensive nature of their production, they are necessarily charged at a higher rate. To avoid spurious imitations, by the frequent occurrence of which Brookman and Langdon's is common with all manufacturers of celebrated articles, have suffered considerably in reputation, purchasers are advised to make choice of the most respectable shops, and to be on their guard against articles offered as best drawing pencils, at a reduced price. Pencils made to order, at any price.—Manufactory, 26, Great Russell-street, Bloomsbury, London.—N.B. All communications by post to be pre-paid.

#### VALUABLE MINE MATERIALS.

**TO BE SOLD, BY AUCTION, on TUESDAY, the 25th inst., at Ten o'clock in the forenoon, AT GREAT WHEEL FORTUNE, near Marazion, the under-mentioned MATERIALS, nearly new, viz.:**—One 80-inch CYLINDER ENGINE, 10 feet stroke in the cylinder, and 8 feet stroke in the shaft; three Boilers, with steam and feed pipes, and other connections to match. Two large and One small Capstans, with shies, &c. One 24-inch Cylinder Whim-engine (single), with One Boiler, cast-iron Axle, Whim-cage, &c. One 19-inch Cylinder Whim-engine (double), with One Boiler, cast-iron Axle, Whim-cage, &c. Two 16-inch 18-inch Plunger Poles, Pole Cases, Stuffing Boxes, Glands, and H One each, 17, 18, 19, and 20-inch Plunger Poles, with cases, stuffing boxes, and H and Top-door pieces for the same. Sixty-five fathoms of 19-inch Pumps. Thirty-five ditto of 17-inch ditto. Eighteen ditto of 16-inch ditto. Twenty-seven ditto of 15-inch ditto. Fifteen ditto of 14-inch ditto. Twenty-six pieces of 12, 13, and 14-inch long Memel Rod Timber, with plates, pins, and staples to suit. One 30-foot diameter Water-wheel, 2 feet in breast, with axle for twelve cams, and crusher attached. Also a large quantity of Iron, Timber, Ladders, Ladders, Smiths' and Tinsners' Tools, Bellows, Anvils, Vices, &c. Dated Great Wheel Fortune, April 15.

#### MINE MATERIALS TO BE SOLD.

**MR. JOSEPH VIVIAN (of St. Agnes) is instructed to offer, BY AUCTION (unless previously disposed of by private contract), on Thursday, the 30th inst., and Friday, the 1st of May next, at Ten o'clock in the forenoon of each day, at EAST WHEEL STRAWBERRY, near St. Austle, the whole of the MATERIALS THEREON, consisting of an excellent 21-INCH CYLINDER ENGINE, with cast-iron Main Beam and 7-ton Boiler, Sixteen Stamp heads attached thereto, with Lifters and Frames complete; Five Sets of Water stamps, with Buddies, Racks, Kieves, &c.; Twenty two 11-inch Pumps; Twelve 10-inch ditto; Eleven 9-inch ditto; Three 8-inch ditto; Eighteen 7-inch ditto; Four 6-inch ditto; One 10-inch Working Barrel; One 9-inch ditto; Two 8-inch ditto; One 6-inch ditto; 9-inch Windrope; Three 8-inch ditto; One 7-inch ditto; One 5-inch ditto; One 11-inch ditto; One 9-inch ditto; Three 8-inch ditto; One 6-inch ditto; One 5-inch ditto; One 7-inch Matching piece; One 8-inch H Piece; 8-inch Plunger Pole, Pole Case, Stuffing Box and Glands; Three Capstans; One Shear, sixty feet high; Two smaller ditto, with Shies and Brasses; about 150 fathoms Iron Rods and Rod Shavers; 140 fathoms 10-inch Capstan Rope; Ninety fathoms 9-inch ditto; Three Whim Ropes, Four H-race Whims, Whim Shies and Kieves, Yokes, staples and Glands, Water Barrels, quantity of Iron-slaved Ladders, Three Balance Bobs, Anger-Bob, Cistern, Connexion Caps, Strapping Plates, Swords and Cheeks, Wrench and Frame, Flanch Rings and Pins, 11 inch Connexion Rods, 6-inch ditto, Whim Chains, Anvils, Three Bellows, Smiths' Tools, Screwing Stocks, Miners' Tools, Tram Waggon and Saddles, large Bell, Grinding Stone, Kibble Mould, Beam and Scales, Taps and Plates, quantity of New and Old Iron, Carpenters' Benches, Grate Plates, Kibble Plates, Miners' Chests, and a great quantity of other articles, with a LARGE LOT OF TIMBER, the whole of which are well worth the attention of Mine Agents and others. For viewing the above, apply to the Agent on the mine, or, for further particulars, to the Auctioneer. Dated East Wheel Strawberry, April 15.**

#### DUNALEY AND TIPPERARY MINES.

Comprising "Silver Mines," "Knockeen," "Gurtina-dyr," and "Shallee," within five miles of Nenagh.

**MESSRS. J. and J. MARSHALL (of Limerick) have the honour to announce, that they have received instructions from the lessee to offer, for PUBLIC SALE, BY AUCTION, the whole of the above-mentioned Mines, on the 12th of May next, at Twelve o'clock, at the company's office, on the Mine, the GOODWILL and entire of the valuable BUILDINGS and OFFICES of these IMPORTANT MINES; together with the whole of the MATERIALS, MACHINERY, TIMBER, IRON, ROPES, WAGGONS, CARTS, &c. &c., comprising Two forty-five fathom Water-wheels, two feet breast, nearly new, with bobs, flat-roads, pumps, &c.; armed capstan and shears complete; three horse-whims; stamps; grinders; four smiths' bellows; and other property, too numerous to particularise. J. and J. MARSHALL.**

#### DUDLEY PORT IRON-WORKS, SITUATE AT DUDLEY PORT, STAFFORDSHIRE.

**TO BE SOLD, BY AUCTION, by E. and C. ROBINS and Co., on Monday, the 27th day of April, 1840, at the Dudley Arms Hotel, in Dudley, at four o'clock in the afternoon, in one lot—the very COMPLETE and EXTENSIVE IRON-WORKS, situate at Dudley Port, on the upper level of the Birmingham Canal, and within a mile of Dudley, adjoining to the mill road from thence to Birmingham, formerly in the occupation of Messrs. Zachariah Parkes and Company, iron masters.**

The works comprise a forge and mill, worked by two powerful steam-engines, employing fourteen furnace, and have produced per week 12 tons of rail-roads, bars, strong and sheet iron. The situation in all respects most desirable and unexceptionable; the engines and machinery are of the best description, and have had all possible attention to their preservation during the period they have been out of work; and the premises include every convenience of shops, warehouses, offices, wharf, workmen's houses, &c.

The property is leasehold for a long period, subject to trifling ground rents, and early possession may be had. It may be viewed on application to Mr. James Cartwright, residing on the premises, who is in possession of two inventories, one of the extensive fixed machinery, &c., which will be included in the sale; and the other of the tools and detached effects, which are to be taken by the purchaser at a fair valuation.

Full particulars, with plan and conditions, will be shortly published, which, with every other necessary information, may be had of Messrs. Ingelby and Wragge, solicitors, Birmingham; Mr. William Fellowes, jun., solicitor, Dudley; Messrs. Collier, Marchant, Hedges, and Steel, solicitors, Carey street, Lincoln's Inn-fields, London; Mr. C. J. Smith, solicitor, 2, King's Arms-yard, Coleman-street, London; or of the auctioneers, Birmingham.

#### HEDLEY HOPE COLLIERY, in the county of Durham.

**MESSRS. VENTOM and HUGHES respectfully inform the public, they have received instructions to submit, by PUBLIC AUCTION, at the Turk's Head Hotel, Grey street, Newcastle-upon-Tyne, on Thursday, the 25th of April, at One o'clock precisely, by order of the mortgagee, without reservation, the above desirable and truly valuable property, known as HEDLEY HOPE COLLIERY.**

It is in the parish of Lanchester, contiguous to the high road next Thornley Pit House, leading from West Auckland to Corbridge, eight miles from Bishop Auckland, ten from Durham, and twenty-six from Shields, in the county of Durham, and comprising 1244 acres, with an excellent high-pressure steam engine, by Murray, with boiler, engine-house, shaft, and gear, sunk twenty-two fathoms; also two labourers' cottages. It is held on lease for a term of twenty-two years, from the 1st of January, 1836, for the first two years at the annual rent of £5-0, entitling the lessee to win and wrought 8000 chaldrons annually; and for the remainder of the term £7-0 per annum for 12,000 chaldrons, but inasmuch that the lessee has merely opened a pit and sunk a shaft, and only worked the same by way of experiment, and as the rent will be paid up to the time of the completion of the purchase, the purchaser will have the benefit of such payment, and thereby be entitled to work back, and raise for the first two years passed 16,000, and for the last two years 24,000—making in the whole 40,000 chaldrons. The estate abounds with coal of the finest quality, close to the surface, and any quantity, at the pleasure of the owner, may be raised.

At the present time it is distant from the following Railways:—The West Durham, five miles from Elm Park, the next working colliery, and seven from Hedley Hope;—which line must be completed to Elm Park by the 1st of September next; the Derwentham four, and as the line has been already measured to join the Stanhope and Tyne, and its being in contemplation to carry the same point to the same, it will come up to this property.

May be viewed, and printed particulars, with plans, had at Thornley Pit House, of Mr. Thomas Wallis, Cross-hill, Stanhope, Washlyford; the Black Bull, Wolsingham; Talbot, Bishop Auckland; Queen's Head, Durham; Turk's Head, Grey-street, Newcastle-upon-Tyne; Golden Lion, Sunderland; Black Bull, Preston; Royal Hotel, Birmingham; Coal Exchange Coffee-house; of Francis Beetham, Esq., Tinsellers-court, Temple; of Messrs. Ventom and Hughes, Auctioneers, Estate and Land Agents, Angel-court, Throgmorton street, London; and at the Black N.B. This Property was advertised for the 25th, but Postponed to the above date.

**COLLIERIES, SOUTH WALES.—TO BE LET, for such a term of years as may be agreed upon, all the VEINY and GRAMS of ANTHRACITE and IRONSTONE, under a property of considerable extent, situate within a quarter of a mile of the Llansyfoddy Railway, and at the nearest point to the Dock at which that Railway enters the Anthracite district; all the veins belonging to the south crop of the Anthracite Coal-field of South Wales are contained in the property, and four seams drop out on the estate. The estate is proved to be free from faults, and has produced Anthracite of the best quality. For further particulars, apply to Messrs. Mauley, Brothers, mineral surveyors, No. 25, Parliament-street, London, and Swansea, Glamorganshire.**

**ROYAL CORNWALL POLYTECHNIC SOCIETY.**—The ANNUAL MEETING of the members of this society for the election of officers for the ensuing year and other business, will be held at the Polytechnic Hall, on Monday, the 27th instant, at One o'clock. The committee will meet at Eleven. Falmouth, April 15. T. D. JORDAN, Secretary.

#### STANNARIES OF CORNWALL.

**PURSUANT to a Decree of the Vice-Warden's Court, made in a cause of "Coward v. Richards and another," the creditors of the defendants, in respect of GUNNIS LAKE MINE, in the parish of Calstock, within the said Stannaries, are forthwith to come in and prove their debts before the Registrar of the said Court, at his office in Truro.—Dated the 14th day of April. H. S. STOKES, Plaintiff's Solicitor, Truro.**

**A GENTLEMAN, who for upwards of Twenty years has been confidentially employed in the COPPER-SMELTING BUSINESS, is anxious for employment. For references, apply to the Editor of the MINING JOURNAL.**

**ANGLO-BRAZILIAN MAIL STEAM-PACKET COMPANY.** Capital £100,000, in 2000 shares of £50 each.

**DIRECTORS.** Alexander Doorman, Esq. George Rougemont, Esq. Frederick Fomm, Esq. Francis J. Van Zeller, Esq. Company's Agents at Rio de Janeiro—Messrs. Emery & Co.; Messrs. Platt & Reid, Bankers—The London and Westminster Bank, Lathbury, and the several branches. Solicitors—Messrs. Roy, Blunt, Duncan, and Johnston, 42, Lathbury, and 19, Great George-street, Westminster.

This company is formed for the purpose of carrying into effect contracts entered into with the British and Brazilian Governments for the conveyance of the mails between Rio de Janeiro and Buenos Ayres, and some of the intermediate ports. The contracts with the respective Governments are for the term of ten years, in addition to which the company anticipate very considerable emolument from the conveyance of passengers and goods.

The advantages secured by these contracts, in addition to the sum payable by the respective Governments, are the exemption from a payment of 15 per cent. levied on all foreign built vessels on charter of flag. The exemption from all port charges, and also the preference of loading and unloading over all other vessels, and the privilege of sailing without a Brazilian captain or crew.

Estimates have been made of the probable outlay required fully to effect the objects of the company, founded upon conditional contracts, already entered into, for the building in London of the requisite number of steamers, as also of the anticipated returns, taken from Brazilian public documents, showing the number of passengers and quantity of merchandise traffic in the year 1835, upon which those of last year show a considerable increase. From these estimates it will be seen that a large profit can reasonably be expected on the amount of the company's capital, the whole of which it is not anticipated will be required.

Mr. Fomm, the immediate contractor with the two Governments, is established as a merchant at Santos, and will attend to the interests of the company in the Brazil. A charter of incorporation will be applied for.

A deposit of £5 per share will be required on the allotment of shares, for which scrip receipts will be given, and the following are the proposed instalments:—£5 per share in one month after; £10 per share in three months after; £5 per share in six months; the remaining instalments to be £5 each, upon one month's notice of each instalment.

Applications for shares to be made to Messrs. Roy, Blunt, Duncan, and Johnston, 42, Lathbury, or 19, Great George-street, Westminster, where prospectuses, with the estimates and a map, showing the line of service, may be had.

**ENGLISH SULPHUR, STONE-COAL, & IRON COMPANY.** Capital £100,000, in 1000 shares of £100 each. Deposit £10 per share.

A method having been discovered to produce large quantities of Sulphur from Pyrites so advantageously as to defy foreign competition, some Welsh capitalists have entered into arrangements that will secure an unlimited supply of the article. It is, therefore, proposed to raise sufficient capital, by a company, to carry on the works on an extensive scale, combined with the working of Anthracite Coal and Iron Mines. A sufficient notice of a meeting, shortly to be called, will be given, to elect a committee of shareholders. For shares, and further particulars, apply (free) to Mr. J. E. Poddick, Adelphi chambers, Strand; or F. Hogard, Esq., solicitor, 17, New Bridge-street, Blackfriars.

#### BRICKS.—IMPORTANT TO ARCHITECTS, BUILDERS,

AND CONSTRUCTORS OF RAILWAYS.—Mr. C. DE LAVALAYE has constructed his PATENT MACHINE, that will make from THIRTY SIX THOUSAND to FORTY THOUSAND BRICKS DAILY, in quality superior to those commonly used in the trade, and at a saving of 35 per cent. This first perfect MACHINE will remain on the premises of the manufacturers, Messrs. Fairbairn and Co., Poplar, to work and be inspected by those desirous of purchasing or obtaining license. It is also applicable to the making of Draining, Dutch, and Pan Tiles, and for Compressing Turf, with inferior quality Coals, and a small portion of Pottery's Clay, to form a combustible material, more durable and economical than the best coals. For further particulars apply (free) to Mr. J. E. Poddick, Mechanical and Commercial Agent, 6, John-street, Adelphi.

#### TO COAL-OWNERS, MINERS, RAILWAY CONTRA-

TORS, EXCAVATORS, &c.—HALL'S PATENT HYDRAULIC BRICK, or WATER ELEVATOR.—By this simple, efficient, and economical invention, which has many advantages over pumps of every description, water is raised and discharged in a uniform and continuous stream, at any required elevation. The work produced, in proportion to the power applied, is much greater than in the case of the ordinary pump of the best construction. The apparatus is now at work on the premises of Messrs. Eveleigh and Neave, Greenacre, Bedford, where it may be inspected any day, from nine to ten o'clock in the morning, and from three to four in the afternoon; also at Mr. Edward Hall's, Bruny Bank, Oriskany, Bedford, and at the Tunnel, on the Manchester and Sheffield Railway, at Battersbrook. A working model can be seen at the King's Arms, King-street, Manchester, where Mr. Hall will give every requisite information.

#### THE PATENT SAFETY FUSE.

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many institutions to its usefulness with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c. &c.:

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, SICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

#### THE THAMES TUNNEL IS OPEN TO THE PUBLIC

every day (except Sunday), from Nine in the morning until dark. Admission One Shilling each. Entrance near the Church at Rotherhithe, on the Surrey side of the River. The Tunnel is now 110 feet in length, brilliantly lighted with Gas, and the Shield is within 50 feet from the Wharf-wall, at Wapping.

By order, J. CHARLIER, Clerk to the Company.

Thames Tunnel Office, Watbrook-buildings, Watbrook, April. N.B.—Conveyances to the Thames Tunnel, by omnibus, from Fenchurch, Charing Cross, Fleet street, and Gracechurch-street; also, by steam boats, at Chelsea, Vauxhall, Westminster, Hungerford, Queenshithe, Dyer's-hall wharf, and London Bridge.—Books, with plates descriptive of the works, are sold at the Tunnel, price One Shilling.

#### TO INVENTORS AND SCIENTIFIC MEN.

**THE INVENTORS' ADVOCATE, AND JOURNAL OF INDUSTRY;** A NEW WEEKLY BRITISH AND FOREIGN MISCELLANY OF INVENTIONS, TRADE, MANUFACTURES, LITERATURE, AND THE ARTS, is published every Saturday Morning, stamped. Vol. 2, No. 1, forming No. XXII. of the work, was published Jan. 4; also the Index, Title, &c. to Vol. 1, in an enlarged Number (No. XXI.), price 6d. Vol. 1 is now ready, price 18s., handsomely bound.

"This is quite a novelty in the scientific world; but it is a most useful and agreeable novelty, and one whose appearance will be hailed with a cordial welcome by some thousands of practical men, whose interests, hitherto, have been only partially and imperfectly represented."—*Edinburgh.*

London: published for the proprietors, every Saturday morning at Seven o'clock, by W. Kidd, 7, Tavistock-street, Covent garden.

#### RAILWAY MAGAZINE, AND COMMERCIAL JOURNAL.

Railways, Banks, Mines, Steam Navigation, Associations, Public Works, &c.—This long-established and extensively-avowed work, which has attained the greatest celebrity for the value of its articles, and its uniform success in all causes it has advocated, is now published weekly, price Fourpence halfpenny stamped, and consisting of sixteen closely and handsomely printed pages. It contains full and accurate reports of all railway and other joint-stock company meetings; steam navigation; agriculture; new inventions; and the most important tables to all travellers of the times and fares of all railway trains throughout the kingdom; unique and valuable tables of the prices of railway and other shares, paper money in circulation, notes, traffic of railways, meetings, calls, and dividends, general, mechanical, and scientific intelligence. A table for every day in the week for each port frequented by steam-vessels. Orders received by all news agents, and at the office, 5, Fleet-street, London.



## LAW INTELLIGENCE.

INFRINGEMENT OF MR. CRANE'S PATENT.  
COURT OF COMMON PLEAS—APRIL 22.

**CRANE v. PRICE.**—This cause was tried before Lord Chief Justice Tindal at the last Middlesex sittings, when the jury returned a verdict for the plaintiff, with liberty to the defendant to move to enter a nonsuit.

The **SOLICITOR-GENERAL** now moved accordingly.—At the trial a formal verdict was taken for the plaintiff, the learned judge being of opinion that the question turned more upon a matter of law than of fact. It was an action for the infringement of a patent. A person of the name of Neilson had obtained a patent for the application of a hot-blast for furnaces used in the manufacture of iron. The present plaintiff had, subsequently, taken out another patent for the use of the said hot-blast in connection with anthracite, or stone coal, which had previously been attempted to be employed for a similar purpose, but without effect. The mode of operation was like that under Mr. Neilson's plan, with the exception that anthracite, in lieu of common coal, was the fuel consumed. This action was instituted for an infringement of the plaintiff's patent. The defendant pleaded not guilty, that Mr. Crane was not the inventor, that the nature of the invention was not properly described in the specification, &c. The learned counsel contended that the plaintiff's specification described a manufacture well known to be carried on by means universally practised, except that, instead of a hot air blast with common coal, Mr. Crane used one with the stone coal, or culm.

Chief Justice TINDAL.—It is applying a *modus operandi* known before, to produce effects also known before. You may take a rule to show cause.

The rule was accordingly granted.

## LONDON AND BRIGHTON RAILWAY COMPANY.

**THE COMPANY v. FAIRCLOUGH.**—This was an action against the defendant, who was the proprietor of certain shares in the London and Brighton Railway Company, for not paying up the amount of the calls on those shares. The cause was tried in the sittings after last term, when the plaintiffs recovered a verdict.

Mr. **SERGEANT BOMPAS** to day moved to set aside the verdict and enter a nonsuit, pursuant to leave reserved by the learned judge at the trial. He urged various objections founded on the words of the Act of Parliament, according to the provisions of which he contended the plaintiffs had failed to establish their right to recover.

The Court granted a rule to show cause.

## MR. MAY'S ALLEGED BANKRUPTCY.

## COURT OF EXCHEQUER—APRIL 23.

**MAY v. HUSBAND AND OTHERS.**—This action was tried at Guildhall, before Lord Abinger, in the sittings after last term, when, after a trial which lasted two days, a verdict passed for the plaintiff, with 2500*l.* damages.

Sir **W. FOLLETT** now moved for a rule to show cause why this verdict should not be set aside, and a new trial had, first, on the ground of excessive damages, and, secondly, on the ground of misdirection by the learned judge. There were several other grounds, however, mentioned by the learned counsel upon which this application was founded, but it was principally on the latter of the two above mentioned that the facts of the case as they appeared in evidence upon the trial, and as bearing upon the point of excessive damages, proceeded to argue the other objection to the verdict—viz., that relating to the misdirection of the learned judge. It appeared that it was necessary, in support of the defendants' case, that a certain deed should be produced and given in evidence on the trial. This deed was in the possession of a person who was subpoenaed, according to the usual form, to produce it, but who refused to produce the deed, unless called by the defendants as their witness, which the defendants declined to do, he being a hostile witness. Against the learned Chief Baron's decision on this point, which was that the witness must be sworn to give evidence as well as to produce the documents required, Sir William Follett cited several authorities of modern date, by which it appeared that the judges had decided that the *subpoena duces tecum* consists of two parts, the one requiring the witness to give evidence, and the other to produce documents, and, therefore, that the party so subpoenaed may be called on to do the latter without being compelled to do the former. In these decisions the learned barons of this court stated their concurrence, Lord Abinger observing that, from the numerous duties he had to perform, he had not had an opportunity of reading, and therefore at the time of the trial he was not acquainted with the cases in which these decisions were given.—Rule *sic* for a new trial granted, partly on the ground of excessive damages, and partly on those of misdirection, and that the verdict was against evidence.

## TITLE TO WORK CLAY PITS.

## ROLLS' COURT—APRIL 23.

**VINER v. VAUGHAN AND ANOTHER.**—This was an application for an injunction to restrain the defendants from digging up or removing the brick-earth from a certain piece of land situate near Clay Hall, in the parish of Alverstoke, in the county of Southampton. It appeared that James Vaughan died in 1823, having by his will, dated October 26, 1822, devised the premises in question to trustees, to permit his wife, Amy, to receive the rents and profits during the term of her natural life, and after her decease to sell the lands, and divide the money arising from such sale among his daughters, Amy, the wife of George Viner, Jane and Betsy Vaughan, Hannah Adams Vaughan, and Clarissa Vaughan. Upon the decease of her husband, Mrs. Vaughan took possession of the property, and continued to receive the rents till 1840, when she entered into a contract with James Hendy, of Ports mouth, builder, by which she agreed to demise to him the land in question for the purpose of digging clay to make bricks. James Hendy, in pursuance of this agreement, began to remove the surface soil and to dig clay, upon which Mr. and Mrs. Viner caused a notice to be served upon both Mrs. Vaughan and James Hendy, requiring them to desist; this was complied with, in order to afford time for inquiring into the rights attached to the estate for life of Mrs. Vaughan, which, having been done, and the opinion being in favour of the right to dig for clay, the working was resumed; upon which, on the 26th of March last, this bill was filed, and the injunction applied for *ex parte*. His lordship, however, considered that the defendants ought to be served with notice, which was done. The application was subsequently several times postponed.

Mr. **PENNINGTON** now insisted that the injunction ought to be granted. He denied the right of a tenant for life, who was impeachable for waste, to destroy the surface, or to do any act detrimental to the inheritance. There was a great distinction between digging for minerals and for clay; in the one case the working was beneath the surface, which was not rendered wholly useless for agricultural purposes; in the other, the surface was wholly removed, leaving a barren waste for those who were to succeed to the reversion. The real question, however, was whether a tenant for life was at liberty to work pits which were not worked by the testator; and, even assuming this, she was not at liberty to uncover fresh ground, since every foot dug was, in fact, the opening of a new pit. From the death of the testator to the present time no steps had been taken to dig any clay; and, therefore, he trusted that the injunction would be granted.

Mr. **STUART**, with whom was Mr. **LEWIS**, said the pit intended to be worked was an old pit, from which the testator himself had taken some clay. He, previous to his death, also had made preparations for fully working the pits, and had erected a mud-house, and had purchased machinery for making bricks. He contended, therefore, that by the authorities a tenant for life was fully justified in working not only such pits as the donor was working, but also all such pits as had been at any time opened upon the estate, notwithstanding they might have been abandoned and partially filled up.

Lord **PENNINGTON** replied.

Lord **LANGDALE** observed that the plaintiff, as one of the children of the testator, was entitled to one fifth of the money arising from the sale of the estate, and claimed a right to restrain the tenant for life, and her lessee, James Hendy, from taking away the substance of the land. There was no doubt the plaintiff had a right to make the application; she was not bound to look to the trustee to protect her, or to say that he was not answerable for waste under it, therefore she had no right to dig for clay. A tenant for life had no right to take away the substance of the land; but it was stated that she had a right to use such pits as had been used by the testator; but did it follow that a tenant for life was to re-open old abandoned pits or mines, or to commence working pits or mines which the testator had merely prepared to work? It had been said that this pit was in a course of working by the testator. It was not so stated in the affidavits. It appeared, however, that there was an old pit which had not been worked for twenty years; from this the testator had taken some clay for some purpose not explained, there was nothing, therefore, from which it could be gathered that this was an open mine, but only that it was an old mine which the testator was preparing to work. Before the right, therefore, was determined, the plaintiff could not be permitted to take away the clay; that must depend upon the evidence in this cause, and whether the pits were in such a course of working as to enable the tenant for life to continue to work them. The injunction, therefore, must be granted, but it was not to be drawn up until it was again mentioned to the court.

**FATAL MINE ACCIDENTS.**—E. Richards was killed on Monday last by the premature explosion of a charge of gunpowder at the Consolidated mines.—David Hughes was killed on Wednesday week by a heavy body of earth falling upon him at one of the quarries, Tredegar.

## ANALYSIS OF ANTHRACITE AND IRON ORES.

BY PROFESSOR W. R. JOHNSON.

[From the "Journal of the Franklin Institute of the State of Pennsylvania."]

In the course of some examinations in the summer of 1838, of the coal-field, lying partly in the county of Luzerne, and partly in Northampton and Schuylkill, I was, among other objects of interest, led to observe the explorations then in progress on the lands belonging to the Summit Coal Company and others, lying on the head waters of Beaver Creek, adjoining the property of the Beaver Meadow Coal Company.

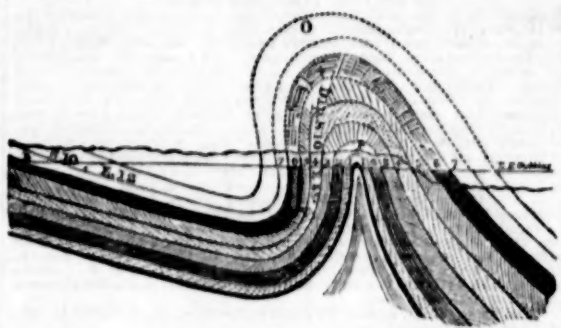
As the facts presented by those explorations appeared to afford solutions of certain questions relative to the position of the coal-beds in that neighbourhood, I was induced to make a collection of such of the minerals as appeared important in that view, as well as indicative of the value of the coal for economical purposes.

I should premise, that the lands of the Summit Coal Company are situated mainly on a swell or bluff of land, lying between Pismire Mountain on the north, and Spring Mountain on the south, forming near its eastern extremity a tapering ridge, or "point hill," between the north and south forks of Beaver Creek; and at its western termination constituting a kind of table land, nearly as high as the tops of the two mountains above-mentioned.

The circumstance in the character of the formation just referred to, is the general conformity of position in the coal-beds in this part of the coal-field with the prevailing figure of the surface of the ground. This is indicated, first, by the southerly dip of the beds on the south slope of Pismire-hill and north of Beaver Creek; secondly, by the northerly inclination of them where exposed on the north slope of the summit bluff; thirdly, by the horizontal position found to prevail on the summit of the bluff; and, finally, by the southerly dip exhibited on the south slope of that bluff, to which may be added, the northerly inclination of the strata in Spring Mountain on its northern side.

The following sketch illustrates the view above given, and as it is derived from actual inspection and measurement of the coal strata, where they are exposed to view in a cutting formerly made for the railroad leading to the mines of the Beaver Meadow Coal Company, affords direct proof of the existence of more than one flexure in the Beaver Meadow coal trough. In this cutting there is displayed a nearly vertical bed of coal more than thirty feet in thickness; having, however, a real position or dip S. 10° E. 85°, and, consequently, a course or "strike" N. 80° E. In sinking a shaft in this vertical vein to a depth of sixty or seventy feet, it was ascertained that the inclination was changed to a northerly dip; and the southern inclination, at the surface of the ground, was observed to continue southerly for 100 or 200 yards, to a point where a thin seam of coal is seen to be cut through just at the level where it comes to an upward flexure, and, after passing to the south of that flexure, the whole series of rocks recurs in an inverse order from that which had been observed in approaching it. The dip also changes at this point from 85° to a much lower southerly inclination.

The doubling of the strata together is thus indicated, and the flexure of the large vein now worked, as exhibited from B to a, is rendered highly probable. The faintly marked portion of the figure between O and p represents the supposed portion of the upward flexure which has been carried away by denudation.



**Coal.—1.** The first specimen of the coal was taken from the opening not far from the State-road, on the summit of the bluff or central ridge, on which the lands of the summit company are mainly situated. It is compact and shining; the black colour slightly inclining here and there to blue-black; the surfaces of deposition nearly obliterated, and the cleats or slines which generally part coal vertically, scarcely, if at all, perceptible. Hence the direction of the fracture appears indifferent, taking place in various ways promiscuously, with a form mostly conchoidal. Slight traces of iridescence are occasionally seen, indicating the presence of minute portions of protosulphuret of iron.

Its specific gravity is .. .. .	1.613
It contains of water .. .. .	3.43 per cent.
Gaseous matter volatile at bright red heat ..	4.08 "
Carbon not volatilisable by simple heat .. ..	87.48 "
Earthy matter .. .. .	5.01 "

The ashes are of a fawn colour, of medium density, and contain the following ingredients in 100 parts, viz.:—

Silica .. .. .	54.50 per cent.
Alumina .. .. .	34.45 "
Peroxide of iron .. .. .	7.50 "
Lime .. .. .	2.25 "
Magnesia .. .. .	1.30 "

Having been taken from near the outcrop of the bed, this specimen is to be regarded as a rather less favourable sample than would be probably found under a greater depth of covering.

**2.** The next specimen analysed was from the northerly slope of the bluff, also near the State-road. In many of its external characters it resembles the preceding, but is less prone to give conchoidal fractures, and its specific gravity is 1.594.

It contains of water .. .. .	3.26 per cent.
Other matter volatile at red heat .. .. .	1.05 "
Carbon .. .. .	91.69 "
Earthy matter .. .. .	4.00 "

The ashes of this specimen were likewise analysed, and gave the following result, viz.:—

Silica .. .. .	50.25 per cent.
Alumina .. .. .	38.90 "
Peroxide of iron .. .. .	8.75 "
Magnesia .. .. .	1.25 "
Lime .. .. .	0.85 "

**3.** The third variety of this coal, which was subjected to analysis, came from an opening which was in progress at the period of my visit to the Beaver Meadow. It was taken from a shaft then sunk fifteen feet in a bed, composed partly of black dirt and partly of solid coal. The sample was taken from the solid part near the bottom. It is like the foregoing in regard to the obliteration of its surfaces of deposition, has rather less of the bluish tinge in its colour, possesses a specific gravity of 1.630, and will, consequently, weigh 27.50 *lbs.* per cubic yard, or nearly 1  $\frac{1}{2}$  ton.

It contains of water .. .. .	3.6 per cent.
Carbon not volatilisable by simple heat .. ..	83.337 "
Earthy matter .. .. .	8.063 "

The ashes of this coal are likewise reddish-grey, varying but little in complexion from the preceding. The combustible gas given out in the distillation of this coal is of considerable amount, and indicates it as a fuel well adapted for use under steam-boilers.

**4.** The fourth variety tried was taken from a pit on the north side of Beaver Creek, and appears to be the third coal-bed in the formation, reckoning from below upwards. The inclination of this bed is to the south, and it accordingly dips under the bed of the Creek. It is ten feet or more in thickness, and presents highly favourable indications as to facility in working. Its colour is fresh fractures is jet-black, shining. The form of fracture irregular, splintery; a striated appearance being occasionally observable. Its specific gravity is 1.560. A cubic foot of it, therefore, weighs 27  $\frac{1}{2}$  *lbs.*, and a cubic yard 28.32  $\frac{1}{2}$ , or about 1  $\frac{1}{2}$  ton. Of this coal two analyses were made. By the first, I obtained of volatile matter, including

Water and combustible gases .. .. .	6.90 per cent.
Carbon, not volatile by simple heat .. .. .	91.64 "
Earthy residuum .. .. .	1.47 "

\* Analysis of some of the anthracites and iron ores found on the head waters of Beaver Creek, in the counties of Luzerne, Northampton, and Schuylkill, Pennsylvania. By W. R. Johnson, Professor of Chemistry and Natural Philosophy in the Medical Department of Pennsylvania College, Philadelphia.

The ashes are of a brownish-red colour, tolerably heavy, and have all the appearance of being derived from a regular red-ash coal.

The unusually small proportion of the earthy residuum given by the above trial, having induced me to suspect that some error might have occurred and escaped notice, I repeated the trial with the utmost attention, taking care to determine, separately, the water and gaseous combustible matter. From this repetition, I obtained—

Volatile matter, 6.42 per cent. {	Water .. .. .	2.19 per cent.
Gas (carbonic oxide, carburetted hydrogen, and a little tar) .. .. .	4.23 "	
Unvolatilisable carbon .. .. .	92.30 "	
Earthy residuum .. .. .	1.28 "	

From this it appears that the first trial on this sample was not certainly below the truth in regard to earthy matter.

The diversity between the two experiments is not so great as will often occur in trying specimens from the same coal-bed. Either may be regarded as highly favourable to the character of the coal. I may be allowed further to remark, that of all the trials of anthracites of which I have any knowledge, either by my own experiments or those of others, the analysis just detailed, gave the least proportion of earthy matter, and even of bituminous and canal coals, I have met with but one result among the many on record, which was even so low in the amount of its earthy impurities; and yet I have no reason to believe that the sample which I picked up at random at the mouth of the pit, was of better quality than the average of the mass from which it was taken.

If the four varieties of coal be viewed together, ranged in the order of their specific gravities, beginning with the lowest, we have the following table of results:—

	Sp. gr.	Vol. mat.	Carbon.	Ashes.
1st. (No. 4.)	1.560	6.42	92.30	1.28
2d. (No. 2.)	1.594	4.31	91.69	4.00
3d. (No. 1.)	1.613	7.51	87.48	5.01
4th. (No. 3.)	1.630	9.60	83.337	8.063

Mean .. .. . 1.599 6.95 89.452 3.838

From the above table it will be perceived that the quantity of ashes increases as the specific gravity increases, and that the quantity of fixed carbon diminishes as the specific gravity increases. This might possibly not be found to hold good in all coal-fields, though I am inclined to think that, in the same coal-field, the relations of different piles will be found to confirm the same general law.

In comparing the results in the above table with those of other experiments on anthracite, I find the average amount of carbon much greater than has heretofore been assigned to that species of fuel.

Thus, of twelve species of anthracite analysed by Berthier, the mean percentage was—

Carbon .. .. .	79.15 per cent.
Ashes .. .. .	13.25 "
Volatile matter .. .. .	7.37 "

It hence appears that while the quantity of volatile matter is widely different from that which I find as the average amount of the same material in the coal of the Summit Company, the proportion of ashes is nearly three and a half times as great.

By a mean of seventeen trials on the coal of different beds at Tamaqua, Messrs. Hache and Rogers found the proportion of ashes 7.3 per cent., or a little less than twice as much as the average of my four analyses of the summit coal of Beaver Creek.

**5.** This specimen was taken from a pit opened on the lands of Cornelius Stevenson, Esq., on the northerly slope of the bluff above-described, but not far from the top of the ridge. The bed has at this point a northerly dip, and, consequently, confirms the view above given in regard to the general arrangement of strata.

The coal is compact, shining, of a bluish-black; its specific gravity is 1.6127; a cubic foot of it will weigh 100.79 *lbs.*, and a cubic yard 27.214 *lbs.*

When heated to redness, the specimen which I analysed, and which was taken from the bed only a few feet from the surface of the ground, or outcrop of the coal, and was, consequently, more charged with moisture than the generality of the coal would be, gave of water, at 550° .. 5.68 per ct.

Combustible carbonic oxide, and a little carburetted hydrogen expelled at red heat .. .. .	3.55 "
Carbon, not volatilisable by simple heat .. ..	86.06 "
Earthy matter .. .. .	3.71 "

The ashes of this coal are of a salmon colour, moderately light, and contain the following proportions of their several ingredients, viz.:—

Silica .. .. .	50.05 per cent.
Alumina .. .. .	29.04 "
Peroxide of iron .. .. .	8.75 "
Lime .. .. .	1.30 "
Magnesia .. .. .	1.56 "

The small proportion of earthy matter found in this coal, with the very slight trace of sulphur observable during the combustion, mark it as properly adapted to the purposes of the founder and iron manufacturer, as well as to domestic consumption. I see no reason to doubt, that in all respects it will bear a favourable comparison with the best varieties of coal found in the district of country in which it lies. Few, if any, anthracite districts have fallen under my observation, which possess a less share of earthy ingredients; and, viewing its relation to the anthracites of other countries, we may state, that of twelve varieties of that fuel analysed by M. Berthier, the result was found to be—

In Carbon .. .. .	highest .913 lowest .665 mean .791
Ashes .. .. .	.249 .. .027 .. .732
Volatile matter .. .. .	.135 .. .022 .. .073

**6.** This specimen of coal was from the lands of the Buck Mountain Coal Company, near the head waters of Laurel Run, and at a distance of about five miles from the locality of those above described. It is, in fact, in the prolongation of that coal trough, in which the Hazleton and Sugar Loaf mines are situated, and is near the south-eastern extremity of the deposit. The bed there dips to the north in an angle of about 14°.

This sample came from the bed twenty-two feet in thickness, lying thirty or forty feet above the conglomerate rock, which appears to be the boundary of the coal formation, and from the lowest ply, except one, in that bed. The thickness of this ply is over seven feet. The distance from the point where the mine is open, to the mouth of Laurel Run, down which stream the course of a railroad, leading to the Lehigh, would lie, is about four miles.

The coal is compact, and of a nearly uniform black colour, shining, fracture uneven, splintery, indifferent in its direction, and seldom conchoidal in its form. Though the surfaces of deposition are discernible by the differences of colour, there appears to be no tendency to cleavage in the direction in which they traverse the coal. Its specific gravity is 1.550, and, consequently, one cubic yard will weigh 26.30 *lbs.*

Its constituents are—water .. .. . 0.390 per cent.

Gaseous matter, including some azote, volatile at bright red heat .. .. . 5.515 "

Carbon, not volatilisable by heat .. .. . 91.016 "

Earthy matter and oxide .. .. . 3.079 "

The ashes are of a reddish-buff colour, rather light, and present some portions perfectly white. They yielded, on analysis, the following constituents, viz.:—

Silica .. .. .	45.60 per cent.
Alumina .. .. .	42.75 "
Peroxide of iron .. .. .	9.43 "
Lime .. .. .	1.41 "
Magnesia .. .. .	0.33 "

The proportions of ashes in this coal is much below that of the average of the anthracites of Pennsylvania. Few even in that part of the central coal district, in which the Buck Mountain Company's lands are situated, will be found to yield either less earthy matter, or more fixed carbon, than the sample above analysed.

[To be continued in our next.]

**CORNWALL AND DEVON PROPOSED RAILWAY.**—We have been informed, through an indirect channel, that the report of the committee appointed by the county meeting held at Bodmin will be accompanied by documents of a highly favourable character as regards the amount of traffic on the road, which alone is at present sufficient to ensure a profit of 5 per cent. on the estimated cost of a line of railway, and, consequently, that all the additional transit of goods and passengers which would certainly be drawn into this mode of communication would be clear profit, less only the expense of engines and carriages. We hope the committee will be enabled to complete their report during the present adjournment of Parliament for the holidays, that the county may be prepared to take the necessary steps for carrying out this great desideratum in the next session.—*Falmouth Packet.*



## PROCEEDINGS OF PUBLIC COMPANIES

## BLAENAVON IRON AND COAL COMPANY.

The annual meeting of the shareholders in this company was held at the London Tavern, on Friday, the 25th inst.

FRANCIS WARDEN, Esq., in the chair.

The CHAIRMAN said, on rising to address them, he had to solicit their indulgence, of which he should much stand in need, on officiating on this, the first occasion, as chairman of this highly respectable company. It was with much reluctance he had accepted that situation, as he considered he had not sufficient practical knowledge to fulfil its duties efficiently; but he had been induced, on the consideration of the reliance he could always place upon the practical knowledge of his colleagues, to accept the situation, and he would endeavour, to the best of his ability, to discharge the duties to the best interests of the company. Since the formation of the company three directors' reports had been laid before the proprietors, in the years 1836, 1837, and 1838, and they now came before the proprietors to give an account of their stewardship for 1839, and they hoped the present report would prove equally satisfactory; the report contained reference to all points connected with the proceedings of the past year, and precluded the necessity of any remarks from him, and, besides the directors' report, they would hear the statements of two professional gentlemen on the state of the works, which he was satisfied would be gratifying. He had to express his regret at the melancholy catastrophe which had happened during the year, in the death of their excellent and lamented chairman, which had deprived the company of the valuable services of a zealous and intelligent director. There was one point in the report which he would just allude to, that of giving power to the directors to raise a large capital for the better carrying on the works; and he was happy to see so numerous and respectable a meeting, as it was a point of great importance, and he thought it necessary to submit it to as large and influential a body of the proprietors as possible. He hoped they would sift the report, and any inquiries which might arise, he and his colleagues would answer to the best of their ability.

The SECRETARY then read the directors' report, which, after alluding to the death of their late chairman, stated that the call of 5s. per share on 8000 shares had been all responded to, with the exception of about 400l.; the profit in the year now available for a dividend was 22,980l. 4s. 4d., and gave a detailed account of the manner in which it arose; there had been sold during the past year 12,892 tons of iron, but the rise in price at the commencement of the year had not been realised to the extent then expected; about 4000l. extra profit had been obtained before the reduction, but this had been counterbalanced by the extra price for hay, corn, labour, &c., in a great measure caused by the chartist riots; the sale of coal had been 18,000 tons, and lime 7000 tons—realising 8855l. 14s. 9d. The returns at the sale shops, from whence the work-people draw their supplies, was 26,884l., on which a profit was estimated of 3602l.; they had made no bad debts during the year, and the whole loss on that head to the company since its establishment was only 100l. It recommended a dividend of 30s. per share, on 8000 shares, payable on 1st May, which, with 25s. last paid, made 2l. 15s. within the year; this dividend would then leave a balance on the year's profit of 980l.; it recommended to give the directors power to raise a further capital of 150,000l., instead of calling in the remaining 5s. per share, to enable them to prosecute the new works with energy; the dividends paid since the commencement amounted to 68,000l., which was 8 per cent. on capital expended, but 10 per cent. on the actually productive capital; it stated that Mr. Clarke, a professional accountant, of Birmingham, had been employed to examine the books, and had found them perfectly correct, with the exception of a few fractional errors—who stated that he had never seen books better kept. Professional reports from Mr. Southon of the underground work, and Mr. Bevan (of Swansea) of the surface and engineering departments, were read, and which were highly satisfactory.

The CHAIRMAN afterwards stated that it had been calculated, that, at 1700 tons per week, it would take 243 years to work out the iron, and at 3000 tons per week, 400 years the coal mines—in fact, they might be considered inexhaustible.

To a question from a proprietor, what the 32,371l., as the sum laid out on the old works, consisted of, Mr. ASHWELL (the managing director) stated, in putting them in a better state for future working, general repairs, casting-houses, corn and hay stores, &c., building, roads, engine, &c.

A PROPRIETOR thought it advisable not to borrow more money, but as their funds were low, to stop the building the three new furnaces, and go on with the old works.—The CHAIRMAN explained, that the directors, who hold large interests in the undertaking, could have but one view with the shareholders generally, which was to carry out the works to the greatest advantage; he was sure the sum asked was not too large, and they might rest assured not one shilling should be laid out that was not absolutely necessary; hitherto the directors had been hampered for want of sufficient means, but he trusted this meeting would now give them the powers requested, to enable them to realise the objects intended.

A PROPRIETOR objected to borrowing money at 5 per cent., to pay off a mortgage at 5 per cent.—it was only borrowing with one hand to pay with the other.—The CHAIRMAN said, the fact was, they had a mortgage of 60,000l. on property worth 260,000l.; they could not increase this sum, but, by enlarging their capital as proposed, they could pay it off, and in case of emergency, at any future period, their property would be unshackled, and they could borrow upon it any sum they might require.

Mr. JONES moved.—"That the report be adopted and printed, and circulated among the shareholders," which was seconded, and carried unanimously.—The resolution, enabling the directors to borrow 150,000l. by way of debentures, was moved, seconded, and carried unanimously.

The CHAIRMAN said he thanked them, on the part of himself and colleagues, for this mark of their confidence; he would just mention, it was their intention to give the shareholders the option of taking up the debentures, and happy should he be to see the whole sum raised among them.

A PROPRIETOR wished to make a few observations, as some gentlemen had objected to go on with the new works; every gentleman present was not perhaps aware that this property was leasehold, having thirty years to run; the richest part of their minerals was under this property, and it was their policy to lay out money freely (using, of course, all due economy), to obtain as much of these riches as possible, and not leave them for the landlord at the expiration of the term.

A PROPRIETOR proposed that the trust deed should be printed, and a copy sent to each shareholder; he had proposed the same thing at the last meeting, which was overruled; he, however, still thought it would be acceptable to a large number of shareholders, and he should again make a motion on the subject.—After some conversation between the chairman, solicitor, and a few proprietors, the directors consented to print it, without passing a resolution on the subject.

Thanks were then voted to the chairman and managing director, who severally returned thanks, and the meeting separated.

## NORTH UNION RAILWAY COMPANY.

A special general meeting of the proprietors of this company was held in the Clarendon-rooms, South John-street, Liverpool, on Thursday, the 16th instant, for the purpose of the proprietors assenting to, or dissenting from, the directors declaring a dividend out of the clear profits of the undertaking for the year; to empower the directors to borrow any sum not exceeding 250,000l., on the security of the works; and to make certain contracts with other railway companies.

THEODORE RATHBONE, Esq., in the chair.

The CHAIRMAN briefly addressed the meeting on the cheering prospects of the company. On striking a balance at the end of the year, it was found that a clear amount of 32,000l. remained to the credit of the company, which would yield a dividend of 5s. per share. There had been a large increase in the gross receipts—an increase of half as much again as the receipts of the corresponding period of the last half year. After detailing the various facts connected with the operations of the company, the chairman concluded by saying that, upon the whole, the directors had every ground to feel such confidence in the future prospects of the undertaking, as not to hesitate to recommend the division of the whole of the net profits of the last half year.

The SECRETARY read the directors' report (at the end of which was appended a statement of the treasurer's accounts), from which it appeared that the receipts for the half year ending on the 31st of December last, amounted to 66,802l. 4s. 1d., and the expenses for the same period to 34,799l. 12s. 8d.—leaving a net balance of 32,002l. 11s. 5d.

On the motion of Mr. J. HOLMES, seconded by Mr. HALL, the report of the directors, and the treasurer's statement, were approved and confirmed.—Mr. WAINWRIGHT moved, and Mr. R. GARNETT seconded, that a dividend of 5s. per share be declared, which was agreed to.

Mr. COGLEN moved a resolution, empowering the directors to borrow under the new act 110,000l. on security of the line.—The CHAIRMAN explained that the sum was wanted, not to pay the dividend, but to complete the line.—The motion was carried unanimously.

Two resolutions were next passed, one on the motion of Mr. JOHN CROPPER, seconded by Mr. RICHARD RATHBONE; and the other on the motion of Mr. BROWN, seconded by Mr. WILLIAM GARNETT, authorising the directors to make arrangements and contracts with other railway companies for the use of their respective lines, upon such terms as might be agreed upon.—Some discussion took place about the propriety of a change of hours in the departure of the trains, consequent on the opening of the Preston and Lancaster Railway during the present summer, and the general accommodation of the public travelling to the north. It was stated that the suggestion would receive the best attention from the directors, after which thanks were voted to the chairman and directors, and the meeting separated.

## INDIAN STEEL-IRON AND CHROME ORE COMPANY.

This company was formed at Madras six years ago, with the view of establishing charcoal iron works on the European plan, for the manufacture of the finest Indian steel-iron from the magnetic ores of that country. The superior character of Indian steel, even in the imperfect state in which it has hitherto been procurable, as made by the natives of India themselves, is so well established, that many cutlers use the mere name of Indian steel, or wootz, as a passport to their wares. Extensive trials of the Indian steel, prepared from the Company's iron, have been made in this country; and it is allowed to possess, in the highest degree, those properties which are the essential characteristics of the best steel. The company, some time ago, purchased steel works at Chelsea, for the purpose of passing their iron, under their own inspection, through every stage of the iron and steel manufacture, and redeeming its character from any doubts that might have arisen from the imperfect manipulation of their first consignments of produce from Madras. The results most fully demonstrated the superior quality of both the iron and steel. Their objects having been so satisfactorily accomplished, the company disposed of those works, and purpose confining themselves in future to the manufacture at the Carnarvon Charcoal Iron Works, of two first-rate qualities of iron—the first quality being more particularly adapted for conversion into steel—and the second, for all the uses of best iron. Specimens of horse-shoe nails (a severe test), manufactured at the above works, have been forwarded to us, and, as far as our judgment will allow us to decide, they are of a very superior quality.—*Cambrian*.

**THE THAMES TUNNEL.**—This work is rapidly proceeding, and preparations are about to be made for sinking a shaft on the Middlessex shore, and forming a staircase for the foot passengers to descend into and ascend from the tunnel, which is expected to be opened, as a thoroughfare for pedestrians only, about the commencement of the year 1841. The excavators have reached to within thirty feet of the wharfs in Wapping, and the Thames Tunnel Company have lately entered into agreements for the purchase of premises over the wharfs adjoining, at an expense of about 8000l.

**GLOUCESTER AND HEREFORD CANAL.**—About 500 men are now employed in the continuation of the canal from Ledbury to Hereford. Nearly the whole of the first seven miles is in progress. The most important works at present under hand are the embankment across the Leaden Valley, at Prior's-court, and the deep cutting at Ashperton. The weather has lately been very favourable for the work, and great progress has been made; part of the line is quite finished. Patent bricks for facing the locks are being made at Ledbury. The bricks are very superior to any before seen in this country. They are moulded in the usual way, and when in a particular state of dryness are forced by a heavy weight into a metal mould, which operation not only brings the brick into a perfectly true and square shape, with a fine smooth surface, but also condenses the clay, thereby making the brick stronger and more durable.

**WYREY AND BIRMINGHAM CANALS.**—About twelve months ago an arrangement was made for consolidating the Wyreley and Essington Canal Company with the Birmingham Canal Company, and we observe that on the 14th instant the Act of Parliament for carrying that arrangement into effect received the royal assent. This union will not only be of great advantage to the proprietors, but also to the public, as the united company are going to lay out upwards of 120,000l. in making two new lines of canal to connect the Wyreley and Essington Canal with the lower level of the Birmingham Canal, by one of which the mines in the neighbourhood of Wednesfield and Willenhall will be brought into the market; and by the other, the lower part of the town of Birmingham may be supplied with coal from the extensive and valuable mines at Brownhills and Cannock Chase.—*Waterloo Chronicle*.

**NORTHAMPTONSHIRE BANKING COMPANY.**—At the balance of accounts on the 31st March, the directors declared a dividend at the rate of 6 per cent. per annum. The business of the bank continues to increase, and realises the expectations held out on the formation of the company.

**JOINT-STOCK BANKS OF THE AUSTRALIAN COLONIES.**—The joint-stock banks in London connected with the Australian colonies are likely to encounter some rivalry on the spot, as it appears that even in the infant settlement of Port Phillip a project of the same kind has been started, and if the letters received to-day thence are to be credited, the shares have reached a premium of cent. per cent. in a short time, after bringing out. It is to be inferred, of course, that a large proportion of these colonists must consist of stock-jobbers, who have become disaffected, from some cause or other, with the mother country. The letters referred to are dated October 14. The proposed bank consists of 2000 shares of 40l. each, and was to commence immediately, under the designation of the "Port Phillip Bank."—*Times*.

**STEAM-PACKETS TO THE WEST INDIES.**—The directors of the Royal Mail Steam-Ship Company have, with laudable promptitude, contracted for the building and machinery for the requisite number of steamers. Three are to be of 1250 tons burden, and in regard to the form and the cabins, of a superior construction. They will be ready for sea in the autumn of next year, when our splendid colonies in the West Indies will be brought practically as near to us as were, not long ago, many parts of the United Kingdom to the metropolis. It would be difficult to exaggerate the beneficial effects which may flow from this change, but we shall not dilate on the subject at present. Many of our readers are aware that some controversy has arisen about the route that ought to be adopted with a view to the convenience of all the interests concerned, and it is doubtless a question which deserves full consideration. We understand the Government has the power of altering the course of the packets as circumstances may render expedient.—*Colonial Gazette*.

**NEW VOLTAIC BATTERY.**—Mr. Alfred Smee exhibited at the Society of Arts a new and very powerful galvanic apparatus, constructed by Mr. Palmer, which he called a chymico-mechanical battery. The peculiarity of construction, as explained by Mr. Smee, consists in coating the negative plate with a layer of finely-divided platinum, which not only insures perfect contact with the exciting liquid, but, from the infinity of points which it presents, causes the most violent action, which instantly ceases on breaking the circuit. The battery exhibited consisted of twenty-four pairs of small plates, and the effects were surprising. Platinum wire was not only heated to whiteness, but actually fused; and iron wire was instantly melted into globules. But the most brilliant effects were produced by connecting the battery with an electro-magnetic machine, when the combustion of the different metals resembled a display of fireworks. The advantages of this form of battery are, that it requires only one kind of exciting liquid (of the cheapest kind), dilute sulphuric acid, the little trouble it causes to keep it in order, for when the apparatus is done with, it only requires to be taken out of the liquid to be ready for use at any period, however distant, and its freedom from noxious fumes. The advantages of this form of battery are, that it requires only one kind of exciting liquid (of the cheapest kind), dilute sulphuric acid, the little trouble it causes to keep it in order, for when the apparatus is done with, it only requires to be taken out of the liquid to be ready for use at any period, however distant, and its freedom from noxious fumes.

**STEAM-BOILERS.**—At the last sitting of the Society for the Encouragement of National Industry, and on the report of M. Séguier, the encouragement, a gold medal was decreed to the elder M. Chassanot, for an apparatus to render the explosion of steam-boilers impossible. According to the report, his invention is perfect, both as regards its improvements on the safety-valve, and an ingenious contrivance to give notice to the crew and passengers of impending danger. Even the contingency of wilful mischief is provided against; as in the event of all the warnings of his machinery failing, or being disregarded, the steam flows back upon the furnace, extinguishes the fire, and destroys all possibility of an explosion.—*Athenaeum*.

## STONE FOR THE NEW HOUSES OF PARLIAMENT.

[FROM A CORRESPONDENT.]

Much time has been spent in deciding upon the description of stone most suitable to be used in the superstructure of the new Houses of Parliament. The quality of much of that lately brought to London from Portland, and used in metropolitan structures of recent date, was strongly objected to, as being very inferior in quality. The gates at Hyde park-corner, and other buildings of recent date, where symptoms of decomposition are already apparent, were adduced as instances of the truth of the assertion. The colour also, which becomes, on exposure to the atmosphere, a chalky white, was thought to be particularly unsuitable to an edifice of a Gothic character. After a protracted examination of the principal veins of stone in different parts of the kingdom, a kind of magnesian limestone, approaching very nearly to what geologists call dolomite, was selected and recommended for use in the new Houses of Parliament. The main cause of the slow progress of late has arisen from a difficulty of procuring this species of material in sufficient abundance, several veins, upon a more minute examination, having been found wholly inadequate for that purpose. But this unexpected obstacle is now happily overcome, and three or four sources of supply have been fixed upon. The first is Balsore, about a mile and a quarter from Mansfield, in Nottinghamshire, belonging to Mr. Lindley. The next is Auston, about six miles from Worksop, on the borders of Yorkshire, on the property of Mr. Sykes. The latter is to be used chiefly in the piloth, and those portions of the structure where great strength is required. The third is Steelley, in the same neighbourhood, but in the adjoining county (Nottinghamshire), belonging to the Duke of Newcastle, which is to be used exclusively for the internal work, and other parts of the edifice not exposed to the influence of the weather. Another place is Norfall, in Yorkshire, on the property of the Duke of Leeds. The stone will be conveyed from the several quarries by the Chesterfield Canal to Gainsborough, and thence by water to its destination in town. A large quantity has arrived, and a good deal of masonry is prepared to commence the superstructure.

## RAILROADS IN FRANCE.

The *Courrier Français* notices the negotiations which are on foot for the proposed railway from Paris to Rouen, and expresses its regret that the new Minister of Public Works (Count Joubert) should have interposed an obstacle to this undertaking, by desiring, as a condition of the Government support, that it should be extended to Havre. The estimate for the line to Rouen is 50,000,000 francs, of which four English companies have, it appears, offered to subscribe 25,000,000. M. Dufaure having promised that the state should contribute 17,000,000, there would be only 8,000,000 to supply for French capitalists; but as M. Joubert is not willing to grant the 17,000,000 promised by the late Ministry, except on the condition of the extension of the railway to Havre, and as to effect this 30,000,000 more would, on account of the greater difficulty of the proposed extension, be required, the deficiency, instead of being only 8,000,000, would be 58,000,000—a sum which would not, according to the opinion of the *Courrier*, be raised, and consequently, the demand of the Minister of Public Works will, if persisted in, be fatal to the whole enterprise. The *Courrier* adds, with great reason, that the system of leaving things undone, because all that is desired cannot be done at once, is fatal to the public interest, and so far from agreeing with Count Joubert in a view which would render so large a capital necessary, asks why even 50,000,000 should be employed, when by making use of the railway to St. Germain, the remainder of the line to Rouen might be made for 40,000,000, in which case the state would have to furnish only 15,000,000 instead of 17,000,000. The importance of a railway from Rouen to Havre is not, says the writer in the *Courrier*, such as to warrant the demand of Count Joubert, as the communication between those towns is rapid by water, and with a railroad to Rouen only, the distance between Paris and London might be performed in eighteen hours. Here, however, the *Courrier* is in error, for allowing three hours by railway to Rouen, seven hours from Rouen to Havre, which is the average time, only ten hours from Havre to Southampton, which is less than the average, and three hours from Southampton to London by railway, the time would be twenty-three hours instead of eighteen. Even this, however, would be a saving of eight hours, as compared with the present mode of communication between Rouen and Paris by diligence, when the roads are in their best state, and of twelve or thirteen hours when they are bad, to say nothing of the numerous accidents which occur in the road to Rouen, when great speed is attempted by the diligence.

**YORK AND NORTH MIDLAND RAILWAY.**—The directors intend opening, on the 4th of next month, a further portion of their line, extending it to Burton Salmond station, near Ferrybridge, and arrangements are in progress to forward passengers by coach from Burton Salmond to the railway station near Sheffield, and thence by railway to London, Birmingham, &c.

**LANCASTER AND PRESTON RAILWAY.**—Necessary arrangements are being made with the utmost dispatch preparatory to opening this line in the month of June next. Great progress has been made with the station at Lancaster, which will be a very handsome structure, and highly ornamental to the southern entrance of the county town.

**DUBLIN AND KINGSTOWN RAILWAY.**—At an adjourned meeting of the proprietors of this company, it was resolved to reduce the fares to their original amount.

**MIDLAND COUNTIES RAILWAY.**—The works on this line, as far as Leicester, are in an extreme state of forwardness, and there is not the slightest doubt the first week in May will see the train flying over the high embankment, or through the deep cuttings to that place. The station is a noble one; the front facing the street is supported by five huge iron pillars. The engine-house, depot for carriages, workshops for engineers, &c., are on an extensive scale. About a mile and a half past Leicester, a very fine viaduct is in course of erection; and at Rugby a viaduct, not equalled by any in the kingdom for workmanship, is finished.

**SHOREHAM RAILWAY.**—An experimental trip, preparatory to the opening on the 11th of May, was made on this railway last Monday. Two of the luggage waggons, fitted up with seats, and covered with an awning, were occupied by Mr. T. Robinson (one of the resident directors) and a party, consisting of his family and friends, chiefly ladies. The distance from New England to Shoreham is about six miles, which was done in thirteen minutes and a half. A mile of perfectly straight road between the Copperas Gap station and Southwick was traversed in one minute and a half, which is at the rate of forty miles an hour.—*Brighton Gazette*.

**SOUTH-EASTERN AND DOVER RAILWAY.**—A report has been industriously circulated by a contemporary, that a great number of men have been discharged from the tunnel works of this railway in our neighbourhood, which is calculated to create a suspicion that the company is in difficulties. We are happy, however, to be enabled to find, on the most minute inquiry, that such a presumption is entirely devoid of foundation. It is true that a few bricklayers have been discharged, owing to a limited supply of bricks on the part of the contractor; but, at the same time, nearly two hundred additional workmen have been set on, at the contracts extending from Abbott's-cliff to Folkstone. The Shakespeare tunnel will, we doubt not, be completed by the end of May.—*Kentish Times*.

**LIANELLY RAILWAY.**—Two splendid locomotive engines, called the "Victoria" and "Albert," have just been landed on Lianelly-quay, for the railway, and are intended to ply regularly thereon, for the conveyance of goods and passengers. The company have commenced in good earnest to ship coal and culm. The economy which has been adopted throughout on this line is a good guarantee to the shareholders of the interest taken in the concern by a most efficient board of directors.—*Cambrian*.

**PARIS AND LYONS RAILWAY.**—A railroad company, to open a line from Paris to Lyons, is forming under the patronage of the Marquis de Louvois.

**THE ORIGIN OF THE COAL TRADE.**—After the grand crisis of the capture of Calais, Philippe, of Hainault, the beloved consort of Edward III., resided chiefly in England. Our country felt the advantage of the beneficent presence of their queen. Philippe had in her youth established the woolen manufactures; she now turned her sagacious intellect towards working the coal mines in Tynedale—a branch of national industry whose incalculable benefits need not be dilated upon. These mines had been worked with great profit in the reign of Henry III., but the convulsions of the Scottish wars had stopped their progress. Philippe had estates in Tynedale, and she had long resided in its vicinity during Edward's Scottish campaigns. It was an infallible result, that wherever this great queen directed her attention, wealth and national prosperity speedily followed. Well did her actions illustrate her Flemish motto, *Jeke wende meke*, which obsolete words may be rendered, "I labour or toil much." Soon after her return from Calais she obtained a grant from her royal lord, giving permission to her bailiff, Alan de Mowbray, to work the mines of Alderston, which had been worked in the days of King Henry III. and Edward I. From this re-opening of the Tynedale mines by Philippe proceeded our coal trade, which, during the reign of her grandson, Henry IV., enriched the great merchant Whittington, and the city of London.—*Falmouth Packet*.



## NOTICES TO CORRESPONDENTS.

**MOORE'S BAY MINING COMPANY.**—We have received the letter of Mr. Charles R. Roberts, and regret the typographical error of which he complains, the signature attached to this letter in the Journal of last week being "Thomas R. Roberts" instead of "Charles R. Roberts." Mr. Roberts must be aware that it is not "usual for an Editor of a paper" to render its columns the medium of a correspondence of a controversial nature, where private interests are alone concerned, except by way of advertisement. We should, perhaps, at right, in not giving insertion to the communications emanating from one side or the other—but, as a matter of business, our columns are "open to all, influenced by none."

**ENGLISH MINING ASSOCIATION.**—We have received the communication of "A Shareholder," referring to the remarks which appeared in our last Number on the proceedings of the shareholders at their late meetings, but cannot give it insertion, as it contains several statements which are entirely untrue. We have also received several other letters on the same subject, chiefly repeating information that has already appeared in our columns.

**THE MINING JOURNAL,**  
Railway and Commercial Gazette.

We have caused the six months' returns, ending 31st March, to be made up, showing the amount of sales in Cornwall and at Swansea for that period, and find the following to be the results:—

Thus it appears that the produce of England, Ireland, and Wales, for the six months, was 81,889 tons, averaging 5*l.* 11*s.* 9*d.* per ton, and yielding in amount 457,664*l.* 10*s.*, while the foreign ores (the principal, if not the whole of which are from the mines of Cuba and Chili) amount to 12,702 tons, or about one-sixth the quantity raised in the United Kingdom, while the value is one-half, being 224,954*l.* 8*s.* 6*d.*; or, in other words, the price obtained for foreign ores, is 17*l.* 14*s.* 1*d.* per ton, while that obtained for those raised in this country is 5*l.* 11*s.* 9*d.*—showing a difference in favour of foreign ores of 12*l.* 2*s.* 4*d.* per ton.

The very considerable increase which has taken place in the amount of ores imported, will, doubtless, strike our readers as being calculated to have a considerable influence on the production of our mines at home, being, as they are, such formidable rivals, and necessarily having an influence on the price of ore in the market, and hence the fall in the standard, which we cannot but consider as being mainly attributable to this influx. In the last six months nearly 250,000*l.* worth of mineral produce, in the shape of copper ore, found its way into Swansea, forming one-third the amount of the entire sales by public ticketing during that period, or equal to one-half the amount produced by the English mines, the price per ton obtained being threefold that of the average of the mines at home.

It is, however, highly gratifying to find, with respect to the produce of the Sister Isle, that the sales from thence are on the increase, while good prices are maintained, except as regards those in the county of Wicklow. Here, however, quantity in a great measure makes up for want of produce, and the mines are said to be working to a profit—the demand for sulphur ores, in which they abound, having given them an additional lift—indeed, of this latter description of ores, nearly 2000 tons a-month are now in course of being raised.

The following sales of Irish copper ore have taken place within the last fortnight at Swansea, viz.:—Sale of 8th April, 1796 tons, at an average of 3*l.* 17*s.* 6*d.* per ton, producing 6964*l.* 10*s.*—this low average being caused by ores of inferior produce from Ballymurtagh; and at the sale of 15th April.

	Tons.	Average per ton.	Amount.
Knockmahon . . . . .	827	£6 18 6	£3729 0 6
Allibee . . . . .	459	8 2 11	3740 12 6

—being, from these two mines alone, 1286 tons, or, 9469*l.* 13*s.*, exclusive of small parcels from other mines; and we observe that, at the ticketing of the 29th inst., which is only a fortnight subsequent to the latter sale, there are, amongst others—

Knockmahon . . . . .	704 tons.
Ballymorthagh . . . . .	504 "
Allibee . . . . .	388

It is not our intention, on the present occasion, to draw any deductions from the statement, but merely submit them as the results of the past six months, and which, to comprehend, require not the aid of a "balance-sheet," nor half a dozen columns of explanation to render them clear.

The proceedings in the cause, "**CRANE v. PRICE and others**," in which the validity of the patent for the use of anthracite or stone coal, in the manufacture of iron, is involved, is now before us, occupying no less than eighty-six closely printed pages. We have carefully perused the address and reply of counsel, and the evidence adduced on the part of the plaintiff, the **LORD CHIEF JUSTICE** having determined that the point at issue was not matter for a jury, but one of law, and thus rendering it unnecessary on the part of the defendants to go into evidence. It cannot be expected that we should insert the entire evidence—indeed, much is of an irrelevant nature, and so admitted on the hearing of the cause. It will, therefore, be sufficient to give the leading features, and most prominent parts of the evidence adduced by the witnesses, from which the following conclusions may be considered as being satisfactorily established—1st, that **Mr. CRANE** was the first to establish the practicability of making iron with stone coal, used as a fuel by the application of the hot-blast; and 2d, that the iron so manufactured is of superior quality, and more particularly as regards its strength.

The main point on which the defendants evidently depended was "NEILSON'S patent," and they certainly worked hard to show that this particular patent covered all manufactures, no matter whether for iron, copper, tin, lead, glass, or any fabrication where hot-blast was employed, not being satisfied with contending that NEILSON'S patent must be secured or adopted in the use of the hot-blast to any species of manufacture, but that the very

combination of the hot-blast with any other process, whether novel or not, was embodied in NEILSON's patent. Hence arises the position assumed by them, viz., that the manufacture of ironstone from stone coal was not under CRANE's patent, but that it came under the patent taken out by NEILSON, which comprehends the application of the hot-blast. This is a matter that we do not feel ourselves well informed upon, and should be well pleased if our contemporary (*The Inventors' Advocate*) would take up the question, which is one of serious moment to patentees—at the same time, that it cannot be deemed otherwise than one of importance to the public. In the present case, it appears that Mr. NEILSON, some twelve years since, took out a patent for applying heated air, or the "hot-blast," to furnaces, forges, &c., with the view, as has been subsequently proved, of economising fuel, which, as regards Scotland, was a very serious consideration, from the nature of the coal, and waste in coking. Indeed, such was the saving effected by the introduction of NEILSON's patent, as applied to bituminous coal, in the manufacture of iron, that, on a visit paid to the Clyde Works, we were informed by Mr. WILSON, one of the proprietors, that instead of using, as they had done, from seven to eight tons of coal in the manufacture of one ton of iron, the quantity then used was about 2 tons 6 cwt., exclusive of the coal required for heating the air, which was brought up to 600 degrees Fahrenheit.

Assuming Mr. NEILSON's patent to be perfect, and possessing the exclusive right of granting licenses, it must be clear that no one could adopt the hot-blast without first acquiring from that gentleman the right of using it, and this Mr. CRANE appears to have fairly considered, as we find that he subscribed to the terms on which Mr. NEILSON granted license for the use of his patent, and accordingly applied it to the manufacture of iron, under the patent which he had himself secured. We are not well versed in the law, as applied to patents, but we have been given to understand that any person, who, by a combination of processes already known, and for which patents may have been secured, shall, in their novel application, originating with him, obtain a result heretofore unknown, may procure, and is entitled to, letters patent for such combination. We will not say we are correct to the letter, as to the position we take, but we believe we are sufficiently so to prove that Mr. CRANE, in adopting the hot-blast, and applying it to a description of fuel for the manufacture of metal which had never before been contemplated or practised, and which succeeded in producing a metal of superior quality, was entitled to adopt such patent, making fair compensation to the patentee, which appears to have been done, and assented to by Mr. NEILSON, subsequent to Mr. CRANE's patent being obtained—and hence his tacit assent to its validity.

We are aware that Mr. NEILSON is not the party trying the question, and that the "Neath Abbey Company" are merely making use of him, which we regret, to take an unfair advantage, or we feel fully assured that, had that gentleman been put in the witness-box, he would never have ventured to claim any right or advantage under the patent taken out by Mr. CRANE, for smelting iron with anthracite, or stone coal, with the hot-blast, and which, so far as the evidence goes, it would appear was in no way opposed by Mr. NEILSON—a course ordinarily pursued where there is a doubt exists as to invasion on any patent previously granted. We believe we are right, when we say that, the fact is, no question would ever have been raised by Mr. NEILSON, and we must, at the same time, express our regret that, in the course of the proceedings, endeavours were made by the plaintiff to show that Mr. NEILSON had no exclusive claim to the use of the hot-blast, inasmuch that he had been anticipated in his ideas by Mr. BOTTFIELD and others, while as regards the carrying out of his specification, it is assumed as being impracticable to raise the heat to 600 degrees (equal to melt lead), which appears to be the temperature approved, or necessary in working anthracite for the make of iron, and moreover that various modifications have since taken place. We cannot but regret that the plaintiff should have raised this question, because there cannot be a doubt but that, in adopting the hot-blast in the onset, Mr. CRANE had only viewed the patent of Mr. NEILSON, and which is further proved by the employment of M'KENZIE, one of Mr. NEILSON's men, to erect the apparatus, and also the agreement to pay a patent right of 1s. per ton on all iron made with the hot-blast. It might be necessary, on the present occasion, when the defendants object to invalidate the plaintiff's patent, by putting forward NEILSON's patent as overriding it, that these points should be raised—we can only say, we regret it. It is, however, clear, that, if the "Neath Abbey Company" can maintain their point, and prove that NEILSON's patent comprehended the use of hot-blast to smelt anthracite or stone coal in the manufacture of iron, then Mr. NEILSON would derive the advantages now sought for by Mr. CRANE under his patent—a result which has been attended with so great a sacrifice of time and money to accomplish successfully.

This brings us again back to the question, whether one or more patents may not be rendered available in any process to which they may be applied, in combination with other processes previously patented, materials being made use of which had not before been employed, while results not before arrived at were produced. We believe we are right in saying, they may form part of the basis of a new patent—at the same time, that terms, we add, must be made for the use of the patent. This we think perfectly equitable, and calculated to effect the desired object—that of bringing a patent into notice, and by encouraging the industry or scientific attainments of others, causing it to be applied to purposes not thought of by the inventor. We will not prosecute the subject further, but proceed to the leading features in the cause, as recorded in the printed statement now before us.

the cause was heard on 11th February last, and occupied two days. Lord Justice Thindal presiding, and a special jury having been sworn.—Sir Eric Pollock and Mr. Smith were counsel for the plaintiff, and the Solicitor-General and Sergeant Bompas for the defendants.

FREDERICK POLLOCK addressed the jury at considerable length, in which, after taking a brief review of the processes adopted in the smelting of ores in early days, and the improvements which have taken place of late, he proceeded to point out the peculiar advantages attendant on the process patented by Mr. Croase, whereby not only was an immense tract of coal,

**LONDON AND BIRMINGHAM RAILWAY.**

The gross amount for conveyance of passengers, parcels, carriages, horses, and mails, for the week ending the 19th April .. .. .	£19,167	6	s
For merchandise for the same time .. .. .	1,797	8	10
Cattle .. .. .	69	15	0
Total .. .. .	£21,033	3	0

(Length of Line opened, 33½ miles.)

Trucks Returns for the week ending 19th April .....	2594	8	10
Parcels and merchandise .....	504	1	10
<b>Total returns for the week.....</b>	<b>4408</b>	<b>10</b>	<b>8</b>

[Length of Line opened, 84 miles.]  
Total receipts for passengers, parcels, &c., on this line for the week ending April 19th, \$3069 17s. 9d.

[Length of Line opened (to Rowford) 10½ miles]	
Passengers to April 10th .....	227,326
Ditto, for the week ending April 10th.....	8,124
<b>Total passengers .....</b>	<b>235,450</b>

## LONDON AND CROYDON.

(Length of Line, 3½ miles.)	(Length of Line, 10½ miles.)
Week ending 23d April .. £3503 ss. 10d.	Week ending 23d April .. £1039 13s. 6d.

ENGLISH FUNDS

Bank Stock, 7 per Cent., 175	New 54 per Cent. Annuities, 800
3 per Cent. Reduced, 124	3 per Cent. Consols and Acct., 91
5 per Cent. Consols and Acct., 91	Eschequer Bill, 21
54 per Cent. Reduced Anns., 900	India Bonds, 3 per Cent., 5 pm.
<b>FOREIGN FUNDS.</b>	
Portuguese, New, 5 per Cent., 300	Spanish Bonds, 5 per Cent., 280
Idem, 1857, 5 per Cent., 322	Idem Passives, 7
Idem 5 1/2 to 5 3/4, 42	Idem Deferred, 42
Dutch 2 1/2 per Cent., 50	Colombian, 1874, 6 per Cent., 254
2 per Cent., 1000	Brazilian Bonds, 7 1/2

Valencia Sulp., 14  
Imperial Brazilian, 154 1/2 1/2  
Culbre Copper, 41  
Hibernian, 24  
Real del Monte, unregistered, 53 1/2  
Birmingham and Derby Rail., 80 3/4  
Great Western Railway, 79 1/2 1/2 1/2  
New ditto, 37 7/8  
London & Brighton, 23 5/8 1/2  
London and Blackwall, 192 1/2 1/2  
London and Greenwich, 102 1/2  
London and Croydon, 104  
London and South Western, 464 1/2  
London & Birmingham, 166 7/8  
Ditto & Shares, 37 64  
Ditto New Shares, 47 4 7  
North Midland, 102 1/2 1/2  
Ditto New, 21 204 1/2 1/2  
Northern and Eastern, 152 1/4  
London Joint-Stock, 124 1/2  
London & Westminster Bank, 23  
Colonial, 53 1/2  
National Bank of Ireland, 16  
Union Bank of London, 34  
London and County, 9  
Union Bank of Australia, 202 0 1/2

LONDON, APRIL 24, 1840.

[illegible]

REMARKS.—Iron is flat at the prices quoted.—Copper is steady, sheets having recently fallen.—Tin is firm.—Lead and spelter, in the last two days, have been in demand, lead at 10s., and spelter at 11s. 1/2s. higher.—Quicksilver no further decline.

## METEOROLOGICAL JOURNAL, 1940

April	Transactions	Balance	April	Transactions	Balance
Friday, 19	(From 20 to 27)	29.50	Monday, 20	20	29.94
Saturday, 17	20 to 24	30.10	Tuesday, 21	41	29.97
Sunday, 18	25 to 30	29.97	Wednesday, 22	56	30.11
Monday, 19	31 to 33	29.94			

Wind, N. E. on the 15th and two following days; N. on the 18th; W. on the 20th, W. on the 21st; and W. on the 22d.  
Except the 21st and following day, generally clear; a shower of rain on the afternoon of the 18th and night of the 22d.

CHAS. HENRY ADAMS.



the greater part of which extended seventy miles in length, by eight miles in breadth, rendered available for the manufacture of iron, but that the iron so made was of a quality infinitely superior in strength, and other properties, to the iron now made in this kingdom—the patent being, the application of the hot-blast to anthracite or stone coal in the blast furnace, in the smelting of iron ores, thereby lessening the cost, from the reduction in the fuel consumed, and yielding a superior product.

The evidence, which we have already observed, is given at considerable length, may be said to be confined to one or two points, while the substance may be considered as equally testing the merits, and ascertaining the validity of Neilson's patent, as that of Mr. Crane, the object of counsel on the one side being to show that Neilson's specification was imperfect, and that he had been anticipated by Botfield, while, on the part of the defendants, the attempt was made to show that experiments had been made with anthracite antecedent to the date of Mr. Crane's patent—and further, that, failing in such proof, then that Mr. Crane's process was simply the application of Neilson's hot-blast, the terms of the specification being of a general nature, and intended to apply to all descriptions of furnaces and forges, as well as materials employed, and thus including anthracite. Among the witnesses examined were Mr. Mueshett, Mr. W. Brough, Mr. Carman, and Mr. Cottam, whose evidence is important, as proving the quality of the iron manufactured at the Yniscledwyn Works, and its superiority over other descriptions of iron, whether by the application of the cold or hot-blast. Mr. Cottam, in his evidence, giving a decided preference to cold-blast iron (the iron made by anthracite excepted), and stating that he was in the habit of giving 20s. a ton more for that iron, as possessing more strength and tenacity than that manufactured from the hot-blast. From the evidence of Mr. Mueshett, it appears that he had tested the strength of the iron by a series of experiments, and we shall endeavour to follow the evidence, with the view of giving the results, which were subsequently confirmed by other witnesses. Having taken a bar of a given length, and introduced one end into an aperture in a wall to the other end, a weight was suspended, so as to give the same degree of pressure throughout, and so to ascertain the weight which the bar would carry—the bar used for this purpose was about an inch and a half broad by three quarters. The breaking weight of a bar of these dimensions, of the iron cast from the furnace in which anthracite had been solely used, was 2094 lbs.; from a similar bar, the proportion of anthracite used being two-thirds—199 lbs., and with one-third of stone coal—180 lbs., while the average of Mr. Tredgold's experiments on iron made from bituminous coal was only 173 lbs.—thus showing a great superiority in the anthracite iron. Further on we find, from the evidence of Mr. J. C. Richardson, that he had tested the Yniscledwyn iron, in shape of chain cable, by an hydraulic machine, the strain at which it broke being nineteen tons, while the usual strain at which other descriptions of iron broke did not exceed sixteen and a half tons. Mr. Cottam states, that he made a series of experiments about two years since, with the view of trying the comparative strength of the iron made by Mr. Crane's patent, and other descriptions which he was in the habit of using, the result of which was of a highly favourable nature; a bar of ordinary iron, four feet long and one inch square, being supported at both ends, and loaded in the middle, was found to break with a weight of 440 to 445 lbs., while the anthracite iron carried a weight of 599 lbs.—the latter bearing 1600 lbs. before it took a permanent set, while in general iron takes a permanent set at 1000 lbs. Some tender Scotch hot-blast iron broke at 403, but when mixed with some of the anthracite iron, it was raised up to 518 lbs., which was the breaking weight.

We have run through that part of the evidence which principally bears on the quality of the iron, without attempting to enter into the details which affect the question as to the legal right, which it is the object of Mr. Crane to maintain by his action. The following remarks of the LORD CHIEF JUSTICE will best explain the grounds on which the proceedings were brought to a close. After expressing himself, to the effect that it resolved itself into a question of law at last, his Lordship thus proceeds:—

"I have been listening with great attention to it; it must come at last to what is the meaning of the word 'manufacture' under the statute, whether the application of a known mode of working the blast, applying it to all purposes, when applied to a known purpose, is a manufacture; and then you come to the other, whether he is the first and true inventor of it. Then it is again a question of law, whether the applying this knowledge, which is part at least of the invention, and a very important one, applying it to that which is also known, makes him or not the first or true inventor. I do not see anything to leave to the jury."

The result was, by consent of counsel on both sides, a verdict for the plaintiff for one shilling, subject to a motion on part of the defendants either for a nonsuit or special case or verdict.—Thus, again, must the subject come under discussion, and, in the interim, the advantages to be derived from the use of the patent are lost to the public.

It is clear that the question to be determined by the Judges is one founded on the following position, advanced by the plaintiff and defendant:—

First. Whether the patent of Mr. NEILSON comprehends the application of the hot-blast to any description of furnace, not confining it to the mode in which such heated air may be obtained, or the fuel employed, or the materials on which it may be employed, in coming into contact with, and bringing into a state of fusion, as in the case of the smelting of iron ores with anthracite?

2d. Whether NEILSON's patent is valid, or whether the hot-blast was not discovered or patented antecedent to his patent?

3d. In case NEILSON's patent does not comprehend the smelting of iron with anthracite, then, whether CRANE's patent is valid, if adopting NEILSON's patent—assuming that the latter is good in itself, as applicable to all known modes of treating or applying it at the time of the patent being secured?

4th. Whether, assuming NEILSON's patent not to be valid, CRANE can adopt any other hot-blast, and thus carry out his patent perfectly independent of royalty to NEILSON?

Thus, it will be seen, the judgment which may be given is calculated to affect Mr. NEILSON in a like manner as it does Mr. CRANE. Our own opinion of the equity of the matter in dispute is, that Mr. NEILSON is entitled to his royalty or patent rent for the use of the hot-blast, which does not appear to us to have been affected by the inquiry; and that Mr. CRANE is in like manner entitled to his patent rent for the process adopted by him, in combination with the hot-blast, to which Mr. NEILSON can have no claim whatever. We should be sorry to find that either of two men, who deserve support, should be sacrificed by the question raised by the defendants, who look only to private gain, and evidently without any regard at whose cost it is acquired.

By a reference to our Law Report, it will be seen that the defendants obtained, in the Court of Common Pleas, on Wednesday last, a rule to show cause why a new trial should not be allowed. It will, therefore, soon be manifest, whether the same ground is to be again gone over, or the point of law merely reserved for the decision of the Judges.

#### LATEST INTELLIGENCE.

REDRUTH, APRIL 23.—Average standard, 1064. 12s.—Average produce, 91.—Average price, 6d. 6s.—Quantity of ore, 2140.—Quantity of fine copper, 177 tons 15 cwt.—Amount of money, 13,067. 1s. 6d.—Average standard of last sale, 1101. 6s.—Produce, 74.

EXPORTATION OF THE PRECIOUS METALS.—The exportation of the precious metals from the ports of London to foreign ports for the week ending the 16th inst., was as follows:—Silver coin to Hamburg, 7000 oz.; Canton, 63,000 oz.; Rotterdam, 4000 oz.—Silver bars to Rotterdam, 5000 oz.—Gold bars to Rotterdam, 450 oz.

#### ORIGINAL CORRESPONDENCE.

##### TIN MINERS' SMELTING COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Your correspondent, "W. C.," in your Journal of the 4th inst., states that he can hardly give credence to the assertion, that the smelters are not working at a profit—the cause of which is said to be the jealousy that exists between the five or six smelting-houses; if, therefore, some light be let in upon their doings, I may enable him to satisfy his doubts, and ultimately lead to the benefit of the mining interest, by rousing that spirit which ought to be in the breast of every man, to put down oppression and trickery, backed by falsehood. The smelters' pretence to the miner, that they cannot give better prices for black tin, because they are not remunerated, is an impudent delusion. The consumer does not object to give them better prices for their white tin, what he asks for, is, steadiness in prices, and complains that he cannot have it because the smelters undersell each other, and produce continual uncertainty.

I have not your Journal at hand, but I recollect that some weeks since you complained of the mystery that attended the sales at the ticketings—the Ticketing Papers sent to you from Treloweth and this place say nothing about the standard, as at the sales of copper—in fact, that they give no information at all beyond the mere price, the number of tons, and the names of the purchasers. To remedy this, and, as a first and most necessary step towards the end you and other friends of the mining interest have in view, I have, at some trouble, obtained the private particulars and calculations, by a smelter, of the last sale at Treloweth, for his own guidance, and I hope to be able to send you a similar paper of the next sale here. You will observe that nearly the whole of the tin at Treloweth consisted of "common," of different grades, and, taking all the prices together, with carriage, the average price which I cut of white tin will cost the smelter (his smelting charges paid), before it leaves the smelting house, will be 74s., or 74l. per ton. Now, if any of your mercantile friends will inform you of the discounts, freight, insurance, agency commission and guarantee, interest of money, &c., you will soon dissipate the mystery of which you complained.

I think the paper I send you quite accurate enough for all your purposes, and am certain that the differences would be very unimportant, if I could compare the papers of all the houses; it must not, however, be forgotten that, by close smelting, and keeping down the quality as much as they dare, without risking a return of the article from the consumers, they will turn it out at somewhat less cost than 74s. per cwt.

To return to "W. C.," I hope that he will not forget the promise contained in his letter, and that he and his friends will unite, if they are independent, as soon as an opportunity offers, to liberate us from the smelters' thralldom, by smelting for ourselves. It cannot be that the mining interest in this county is so poor in purse, and so poor in spirit, as to require the aid of strangers to emancipate us.

I remain, Sir, your humble servant,

Redruth, April 20.

A TIN MINER.

##### PRIVATE PARTICULARS OF TRELWETH TIN TICKETING, APRIL 14, 1840.

Mines.	No. of tons.	Full produce.	Reserve.	Nett produce.	Quality.	Purchasers standard according to assay.		Price per ton for black tin at the ticketing.	Average, in addition to black tin price.	Smelters standard.
						Without Carriage.	With Carriage.			
St. Ives Consols	23	13	14	117	common	s. d.	s. d.	s. d.	s. d.	s. d.
Do. No. 2	21	14	12	12	good ditto	—	—	45	2	6
Charlestown	20	13	12	12	ditto	74	3	6	0	20
Do. No. 2	6	14	12	12	ditto	72	9	4	12	6
Great Work	26	14	12	15	superior	75	0	7	15	0
Wheal Mary	25	14	12	12	good com.	74	6	25	14	0
Boscawell D.	22	14	12	12	ditto	73	6	25	9	17
Balteswidden	15	14	12	12	ditto	73	0	7	4	10
Do. No. 2	4	13	12	12	ditto	72	4	7	4	10
Wheal Reeth	17	13	12	12	ditto	74	3	7	4	0
Do. No. 2	2	12	12	10	common	70	3	6	4	17
Do. No. 3	1	12	12	11	good ditto	70	7	5	9	3
Boscawell	12	14	12	12	fine	76	0	—	4	2
Carleaze	12	14	12	12	common	76	6	27	8	12
Tincroft	1	12	12	10	fine	76	6	27	8	10
Do. No. 2	1	11	12	10	common	72	7	5	0	6
Rosewell Hill	7	13	12	11	fine	78	0	7	6	12
Parknoweth	24	13	12	12	ditto	77	0	7	6	10
Holbush	8	13	12	12	common	73	9	7	6	5

[We are much obliged to "A Tin Miner" for the very valuable information contained in the foregoing document, and shall be thankful to receive that for the current week. We look on these particulars as of great value, and having also ascertained the charges on bringing the metal into the market, we hope to be able to explain, with the help of the material furnished, in addition to our own experience and information, the relative position of the tin miner and smelter. For this week, however, we must defer our remarks on this important subject.]

##### ON THE MINES IN THE EASTERN DISTRICT OF CORNWALL.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I have read with much interest the "Old Miner's" letter of the 8th instant, and your remarks on the mines in the eastern (Callington) district, and hoped it would have been followed up by some more able to argue the subject than myself. It is true that large sums have been expended in mines in that district, and that many of them had very fair prospects, but that because they did not at once turn out profitable, nearly all of them were abandoned, without why or wherefore. Those that have been persevered in, however, are beginning to show good, and the great improvement in the Holbush Mine, at the 100 fathom level, is, in my opinion, an earnest that the district is deserving attention. As an adventurer in the district, I well remember, some three or four years ago, a proposition was made by the then manager of the Holbush Mines to the Redmoor Company, to put down a boundary shaft at the joint expense of both companies; had this been done, it is very evident that the Redmoor Company would, long ere this, have been sharers of the most profitable results, and the Holbush would have doubled her present dividends. It is clear to me, that the manager who made that proposition is entitled to more than an ordinary share of credit. I regret that his views had not been followed up, for to him are the public indebted for the mines now at work. I agree with the "Old Miner," that scrip concerns, with all their faults, have some good qualities, and have no doubt that those who follow them will reap a rich harvest. I am a loser by many of them, and amongst which is the East Wheal Brothers, now renamed as the Harrowbarrow Mines, as noticed by "Old Miner." I wish them every success. I have been over the ground, and although not much of a miner, am persuaded it is a valuable property, and from her former well known workings and produce, no doubt can be entertained but that she will turn out a prize, adding fresh laurels to her district. From her locality, and being parallel lodes with Holbush, I see no reason why she should not be equally good.

I remain, Sir, your obedient servant,

Regent's park, London, April 23.

AN ADVENTURER.

[We are disposed, with "An Adventurer," to give credit where it may be due, with reference to the suggestion for the more effectual working both of Holbush and Redmoor Mines by the method suggested. We can add nothing to our report of last week, as to that proceeding not being adopted by the Redmoor Mining Company. We anticipate favourable things of the eastern district, and the East Wheal Brothers may prove a valuable mine, but "An Adventurer" must not suffer his partiality to lead him into undue terms of praise.]

##### ON THE BETTER DRESSING OR PREPARATION OF ORES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Knowing the interest you take in all matters relating to mining, and having noticed in your recent Numbers some remarks, by various correspondents, on the advantages that would accrue to the miner from the better dressing or preparation of ores, whether of tin, copper, lead, or any other mineral, for the market, I had hoped that some practical suggestions would ere this have been offered for remedying the evil, where it may exist—more especially by instituting a comparison betwixt the processes of our own with those of foreign mining countries. I believe there are descriptions published, but, if so, they are inaccessible, from their ex-

pense, to the majority of those to whom they would be more particularly valuable.

Should any of your correspondents possess information on this, to the practical man, very interesting and important subject, he will, I am quite sure, by noticing it in your columns, be doing the miner some service, and, perhaps, by establishing the fact of there being superior methods to our own, enable ores of very low produce to be rendered cheaper in the market.

I am, Sir, your obedient servant,

T. H.

April 23. [We agree with our correspondent in his suggestion. It has been much to the miner's disadvantage that such useful information has been confined to expensive sources, and we are pleased that the accessibility of the Mining Journal and Review renders their columns peculiarly adapted for the diffusion of valuable practical information. A very interesting description of the "manipulations to which tin and copper ores are subject in the central mining district of Cornwall," has been published in the Fourth Volume of the "Transactions of the Geological Society" of that county, by Mr. W. J. Henwood, in which it appears that very little improvement has been made in the mode of dressing tin ores for nearly a century, and, also, that as regards the treatment of the "slimes," or leavings, "we are much behind the German dressers." The methods adopted for copper ores have received, during the past few years, considerable improvements from the introduction of the crushing-machine and jiggling machinery. It will give us great pleasure to receive any practical suggestions, or to be the medium of "instituting a comparison betwixt the processes of our own with those of foreign mining countries"—and in this, we hope the knowledge which we are aware some of our correspondents possess, in no trifling degree, will be made available.]

#### MINING CORRESPONDENCE.

##### ENGLISH MINES.

###### ST. HILARY MINING COMPANY.

April 19.—The water is now down in the sixty fathom level, and only the bottom clock under water, which I expect will be seen to-morrow—they are now in a very good course of working.]

###### HOLBUSH MINING COMPANY.

April 20.—The 100 fathom level, west of the engine-shaft, has much improved during the past week, in which the lode is twenty inches wide, and may be valued at 30l. per fathom for copper ore. In the rise, at the back of this level, the men are still desling the lode, consequently but little can be said of its quality. In the eighty fathom level west the lode still continues a rich course of ore, being from twenty inches to two feet wide, and worth about five tons of ore per fathom. In this level, driving east of Seil's winze, the lode is one foot wide, and worth about 16l. per fathom. In the winze sinking below this level the lode is much of the same size and quality as last described, sixteen inches wide, and worth two and a half tons, or about 18l. per fathom. In the stopes, in back of the eighty fathom level, the lode is eighteen inches wide, and worth about 30l. per fathom. In the seventy fathom level the lode is about nine inches wide, intermixed with copper ore. The stopes in the back of this level are still very productive, lode about two feet wide, and worth five tons, or 40l. per fathom. In the sixty-two fathom level west the lode that has lately been driven on is small, and are now driving north for the purpose of ascertaining whether there is not another part of it in this direction. In this level, east of the engine-shaft, the lode is much as last reported. The stopes in the back of this level are still very good, lode two and a half feet wide, and worth eight tons, or about 70l. per fathom. The tribute pitches, upon the whole, are looking well, and still making good returns.

F. PHILLIPS.

[This report may be considered as of a very favourable nature. The improvement in the 100 fathom level—the deepest part of the mine—is, indeed, most important.]

###### TRETOIL MINING COMPANY.

April 18.—The lode in the thirty east end is from two to three feet wide, producing tolerable work, improving in appearance. The lode in the adit end east is from twelve to eighteen inches wide, producing very good work—improved since my last. In cross-cutting three and a half fathoms south, at the adit level, about twelve feet west of a cross-cut driven north (as may be seen on the plan), we have intersected a lode or branch from six to nine inches wide, yielding good work, and from its regular appearance, we suppose it to be the main lode; about this place, commenced sinking a new shaft, by four men, at 12s. per fathom, till setting-day. In my last report for March, I stated our calculations of ores raised for that month to be about 130 tons, which we find have turned out in dressing more than we expected. We shall sample from 150 to 170 tons, I hope, the first week in May.

J. BRAY.

###### UNITED MILLS MINING COMPANY.

April 21.—In the adit level east, the lode in this winze is about three feet wide, producing but a small quantity of ore. In the adit level west, no lode discovered as yet driving north. No alteration in the ten fathom level. In driving east, at the thirty-six fathom level, the lode is about three feet wide, with stones of ore. In the west end the lode is large, with ore throughout, but not rich. In the forty fathom level, in driving east of eastern shaft, the lode is three feet wide, coarse in quality. West of James's the lode is five feet wide, with a small quantity of ore. In the stopes, east and west of Webster's winze, the lode is four feet wide, good ore. In the winze, sinking below this level, the lode is five feet wide, very good ore. In sinking Nettle's winze the lode is from four to five feet wide, two feet good ore. In diagonal shaft the lode is five feet wide, three feet good ore. In the fifty fathom level, east of Williams's, the lode is five feet wide, eighteen inches ore of a fair quality. West of Williams's the lode is four and a half feet wide, two feet good ore. Sampled 401 tons of copper ores.

C. PENROSE.

[Captain Cyrus sticks to the same form in his reports as heretofore, and we are glad to notice so much ore ground.]

##### CORNWALL MINES.

Chiserton, April 21.—At the fifty fathom level, driving west on Chiserton lode, we find a little improvement in the ground; the lode is about two feet wide, and of a more promising character than I have seen for some weeks past. Our tribute pitches are looking just as they were (as to prospects) on our last setting-day. We have now broke towards a new parcel eight tons, and on Tuesday next we shall sample about forty tons of lead ore of good quality.

JOHN WENN.

[In the last week's report, it will be remembered it was stated that, with the exception of the fifty fathom level west, the other levels had been suspended. We made no remark on that occasion, as we purposed making inquiries in the county as to the nature of the underground workings. We regret to find that the network has been limited, as above, and that the working of the mine is confined to the fifty fathom level west where it is intended to drive under the ore ground which was productive at shallower levels. The number of tributers, we understand, are nearly sixty, while not more than one-tenth that number of men are employed on the network. What does this mean? Is there any particular object? That it cannot be for the advantage is quite clear. Perhaps some of the parties interested will afford us explanation on the subject.]

#### FOREIGN MINES.

##### UNITED MEXICAN MINING ASSOCIATION.

###### Report on the State of the Workings of the Mine of Rayas.

Jan. 16.—Of the four weeks that have elapsed since the last report, one contained only four work days, and two only five work days each, which will in part account for the produce appearing low.

La Paraisina.—In the end Santa Margarita, a small body (ojon) of very favourable appearances presented itself, and continued for a few days, when it almost suddenly disappeared, and the work is now advancing in its former state. The pit of San Hermion has been suspended. The end San Antonio has been resumed, the water of Mellado having been marked at its level by peritos appointed for the purpose, and the owners of that mine being willing to recompense Rayas for any benefit that may result to their mine, supposing the water to be lowered by means of the proposed communication between San Antonio and Dolores. The entire cielo of Santa Victoria, the end of the same name, and another point in Santa Irene, are the productive workings in La Paraisina, in which eleven pairs of barmen have been employed by day, and six pairs by night, and the weekly produce of ore in the rough state has averaged 350 cargas, which, when picked, have yielded eighty-five cargas of aznages, of about twenty marcos per monton in the patio, and two marcos plata de ley in the arrastres; twenty-five cargas tierras de mortero, and fifty-four cargas tierras de labor, together of about eight marcos per monton in the patio, and one marc plata de ley in the arrastres.

San Cofre.—In the fourth pit of Jesus, the ore are at present the best on the south-east side of the working, consequently, an end has just been commenced; the body of ore in the pit itself is still of good breadth, but the produce has somewhat decreased. The two ends in the pit of San Feliciano are advancing on good ores, that to the north-west (which will ultimately be communicated with the fourth pit of Jesus) being the more productive; a slight improvement in this pit has just taken place, a narrow body of ore having been laid open. The end San Francisco will soon be communicated with the pit of La Luz; the extraction continues of fair quality and quantity; an end in front of this—viz., to the south-east, is being opened, which will



yield good ores while it lasts, for it will soon reach the pit of San Pablo; a new end has been commenced on common ores in the pit of Patrocinio to go through the border between this working and the first pit of Jesus, and another has been opened opposite the pit of Lereto, which will pass through the border between the pits of La Luz and San Francisco. Twenty-one pair of horses have been employed in San Cayetano by day, and an equal number by night.

**Los Reyes and Las Animas.**—The contra cielo of Los Reyes has again become rather more productive than at the time of the last report. The end to the north-west has been communicated with the old working of San Pablo (not the San Pablo of San Cayetano). The cavity discovered in the end to the south-east was found to contain, against the lower part of it, a small band of tierras (varying in length from three quarters to one vara, and in breadth from one quarter to one-third of a vara), which proved to be of very good quality, containing upwards of forty marcos per monton, and amongst these tierras some rich stones were found; the band of tierras has disappeared, having produced eight and a half cargas, and ores in bunches and threads are now found in two pits that have been opened in the cavity. The pit at the north-west end of the cavity (and which may be called the continuation of the pit of Guadalupe) will probably be communicated hereafter with the old end to the south-east of Los Reyes; the other is in solid ground, and should the ores hold, may last for a long time. In the pit of Guadalupe, an end to the north-west is being driven on good ores; this will reach in due time the contra cielo of Los Reyes. The produce of the contra cielo of San Pablo is considerable. The two pits, two ends, and contra cielo of Las Animas, are producing a fair quantity of ore of good quality. Nineteen pair of horses have been employed in these workings by day, and the same number by night. The weekly produce of ore in the rough state from San Cayetano, Los Reyes, San Pablo, and Las Animas, has averaged 1575 cargas, which, when picked, have yielded 190 cargas azogues, of about nine marcos per monton in the patio, and one marc and a half plata de ley in the arrastres; sixty-one cargas tierras de mortero, and thirty-two tierras de labor, together of about five marcos per monton in the patio, and half a marc plata de ley in the arrastres. It must be observed, that the tierras de labor lately produced, are not available from their very low ley.

**San Juan Bautista.**—Three pair of horses are employed by day, and as many by night in this cross-cut, which has not undergone any change since the last report.

**San Miguel.**—Thirty-seven cargas of good ore have been produced from the workings on this side of the mine. The principal points have advanced for some time in what appears to be solid ground, but the ores are very scarce, and, at the same time, scattered over a great surface. There have been four sales of ores on joint account with the buscones, amounting in all to \$16,414 7, of which one half, \$8207 3 4, belongs to the mine, and ores to the hacienda of Herrera, 210 4 cargas.

**Ores on hand at the Mine.**—Picked, 1593 cargas; unpicked, 1590.—Total, 3173 cargas.

**Mine of Rayas, and Rayas accounts, to 30th June and 31st December.**—The late Christmas and following holidays, I regret to state, have had their usual effect in curtailing the produce, and reducing the returns of the mine throughout the interval since the date of my last dispatch, the quantity of picked ores in that period—that is, from the 14th ult. to the 11th instant, having averaged only 46½ cargas weekly, and the sales, of which there have been four, on joint account with buscones, producing together \$16,414 7, or \$4103 6 per week. The estimated value of the former, added to the mine's share of the latter, shows, however, a surplus of about \$4000 over and above the expenses at the mine, and for the reduction of the ores, or \$1000 weekly during the same period. The falling off in the workings of San Cayetano, noticed in my dispatch of the 20th ult., has not only continued, but has extended itself to those of Purisima in the last fortnight, as respects quantity of produce, and I fear, moreover, that both points will continue in their present impoverished condition for some time to come—whilst, on the other hand, a new point in Los Reyes, lately brought to light by a natural fissure in the vein, from which a few cargas of tierras, of forty marcos of silver to the monton, were extracted, promises to become productive ere long, and to replace the deficiency of San Cayetano and Purisima, being on solid ground, and in very fair ores. The latter have not yet been assayed, but promise some seven to eight marcos per monton. I beg reference to the enclosed usual report of Mr. Glennie, and to which I have nothing further to notice. I beg to inclose herewith the copy of the balance-sheet of the accounts for the past half year, by which the court will perceive that the realised surplus, from the 1st July to the 31st December last, amounts to \$95,309 4 2—and further, that the estimated value of the ores on hand, at the last mentioned date, is \$87,539, as per statement, also transmitted herewith, making a total of \$182,848 4 2, and to arrive at the *bona fide* results of the past year, in respect of the mine, it is necessary to take the amount of realised profits as per balance of 30th June . . . \$63,072 7 6  
Balance to 31st December . . . 95,309 4 2

Less for difference of value of ores on hand on the

31st December, 1838 . . . \$77,723  
And value of the same, 31st December, 1839 . . . 57,539—20,184 0 0

Value of ores on hand on 31st December, 1839, as above . . . 57,539 0 0

Making a total surplus for the past year of . . . \$195,737 4 0

With regard to the usual statement of outlay and returns in respect of the mine of Rayas, as the accounts now closed, and alluded to above, afford all the necessary data to the end of the last past year, the inclosed document necessarily commences from the 1st instant, and, with the new estimate made of the value of the ores on hand, brought down to the 11th of the same (the last expired week), and showing a surplus of \$59,360 7 7.

**Haciendas.**—The accounts just closed to the end of the last year, show a realised profit of \$21,764 2 4 in the three hacienda establishments of Barera, San Matias, and Dolores.

**Remittances.**—The northern Federalists, &c., having been defeated and dispersed near Matamoros, by General Arista, it is fully expected that the general Government will grant free permission to the transit, direct to Tampico, of conductors from the interior; and, in this belief, remitters from hence have partially fixed the departure of one on the 1st March next for that place, and by which it is my intention to forward another remittance to the court, but I cannot at present determine the amount.

Statement showing the outlay and returns in respect of the mine of Rayas.

From the 1st to the 11th January, 1840, and the value of ores on hand—  
Amount of outlay from 1st to 11th January . . . \$16,221 1 3  
Returns during the same period . . . 14,163 1 4

Excess of outlay . . . 2,058 0 1  
Value of ores at the hacienda of Barera . . . \$50,594 0 0  
At the mine of Rayas . . . 10,935 0 0—61,529 0 0

Surplus . . . \$39,360 7 7  
J. N. SHOOLBRED.

#### ANGLO-MEXICAN MINING COMPANY.

**Guadalupe, Jan. 18.**—Guadalupe.—The dividends have been \$81 3 4 for the months of November and December. The mine was not encouraging at the date of the last advices.

**Serna.**—The average amount of sales for the four weeks ending the 11th inst. has been \$755 3; has rallied a little lately, and affords again some prospect of moderate recompense to the parties by whom it is rented.

**Jan. 31.**—I have been enabled to complete the contract for the Cedro mine, on Monday last the company entered into possession, and the drainage was commenced; enjoys an encouraging reputation, and most fervently do I hope that, as one single mine (Rayas) has restored a sister company from impending annihilation to a state of considerable prosperity, so may the Cedro do for us. I do not look for rich ores, but I think it is not too sanguine to expect the produce of good common ore will be sufficient to keep San Augustin and Purisima at full work, in which case a considerable change for the better will take place.

**Captain Parkman's report, ending January, 1840.**

**Mine de Anson.**—In the last monthly report I gave the opinion that the level of San Esteban would be concluded as far as the Presa by the end of the year; unexpected difficulties have delayed it, but it is believed most difficult ground is passed through, and that we are now near the Presa; from this point the completion of the road to San Patricio will require but little time or expense to extend a transitable road from San Patricio to San Juan de Dios. These are the two points that we intend to work immediately on hacienda account, and they are believed to be in ores that will pay the cost of their extraction, and assist towards the maintenance of the mine. In my last report I mentioned that we had resumed hacienda work in the contra cielo of San Pedro; I then gave reason to hope the ore extracted would pay the expense; I am now quite certain that it will do so, and also leave some profit—the labor has been improving, and looks well at this moment. We are only waiting the communication of the pore of San Pedro with the general road to increase the amount of work, and of course the produce. At present the want of ventilation and room for the tapetes prevents the augmentation of workmen. These difficulties will be obviated by the communication on before spoken of; the experience of the past month leads me to believe that but little is to be expected here from the work of buscones. As a general summary of the prospects of the mine, I am of opinion that they are

decidedly improved, and hope in the next communication to be able to announce a still more favourable state of affairs.

**Feb. 14.**—Above you have the mine report for the last week. The extraction of ore from Anson is estimated to cover the memoria. Operations at the Cedro are going on satisfactorily. The drainage I consider as being now one-half completed.

#### BOLANOS MINING COMPANY.

**Bolanos, Dec. 28.**—The opening and securing San Lorenzo pit is going on very favourably, and will be finished in about another week. Taylor's level, driving north of cross-cut, is in a large lode, containing pinitas and small strings of lead and azogue ore. The same level, driving south of cross-cut, has improved a little during the month; the ore is about a vara wide, the widest being near the bottom; the vein throughout the whole length of the planes continues large, averaging about forty-six inches in width—the ore part, however, in each winze, is nearly as follows:—San Antonio one vara, Santa Barbara one ditto, San Juan Nansomuceno two and a half ditto, Noria two ditto, Santa Brigida one half ditto in bunches, San Pedro one half ditto ditto, San Nicolas three-quarters ditto ditto. The quantity of ores raised during the month amounts to 3088 cargas, and in next month I expect we shall raise about the same quantity. The San Martin level, driving south of San Francisco winze, is still poor, containing, however, small strings of lead and azogue ore. In Cocina, the Santa Tomas level, driving north of shaft, has lately produced some rather promising stones of ore; the vein is about one and a half vara wide, having a small branch on the footwall containing lead and azogue ore. In the level driving north of Las Animas winze, twenty varas below Esperanza level, the vein has improved, and the ore in the present end is rather more than one vara wide, containing per assay about twelve ounces per carga. In the branch mines there is nothing particularly new. In Santa Fe the preparations for resuming the drainage are in a forward state. In the mineral of San Antonio the workings both in San José and Refugio continue poor, although from the former we have lately got some stones from the end driving west, containing pasta and lead ore, and about three ounces of silver per carga—the quantity, however, is small. In Picardo, the San Antonio winze is sinking in a promising vein, about two and a half varas wide, having a branch one-quarter vara wide, of good level ores; the other part contains some good copper ores and pinitas of silver. The adit level north is at present poor, but the driving is continued for the purpose of examining the vein deeper into the mountain, and under some old workings which appear to have been productive above.

**Jan. 15.**—I have already explained in a former letter that the low ley of San Clemente mine, the difficulty of smelting those in Bolanos in December, and the heavy purchases for materials, have been the principal cause of our low state of finances. I am, at the same time, happy to say that both Bolanos and San Clemente are now more promising, particularly the first, and I do not despair of getting over our pecuniary difficulties before my departure for Europe.

#### REAL DEL MONTE MINING COMPANY.

**Mineral del Monte, Feb. 7.**—There are about 154 varas of clear and secure adit east of San Ramon; this is important, for besides the expense of saving the clearing of timber, drawing, &c., which would have cost about \$5000, it will aid us much, and save much time in clearing and examining the old workings. We are now erecting a second malacate on San Ramon shaft, to more speedily clear it, and reach the bottom workings. In the prosecution of a new side adit, to avoid the dangers of the old, the ground has proved favourable. We expect, in the course of the present week, to communicate the two points now driving to meet each other between Terreros and Guadalupe, and also the two other points between Terreros and Santa Teresa, and thus put an end to some of the costs of this work. On finishing these, however, it will be necessary to employ some additional force, with a view to hasten the completion of what remains to be done further eastward, in order to place ourselves upon a safer footing with respect to the conveyance of the adit water. There is a fine lode, with azogue and smelting ore in the San Clemente winze, but owing to the recent increase of water in the Socorro cross-cut, and the hindrance occasioned by the frequent stopping of the engine, owing to accidents, probably produced by the quick motion of the machinery, very little has been done at or under the San Felipe level, for some time, the water in the Socorro cross-cut only being out three days during the last six weeks. The drainage by Terreros engine reaches to a considerable extent, even beyond the limits of the Biscaina vein. The adit level driving north of the Biscaina still continues to look favourable, the vein is several varas wide, with about one vara of the same kind of azogue ore mentioned in a former letter. From the adit and workings over the 182 vara upper level about 300 cargas were extracted during the last month, which, from the assays we have made, ought to produce twelve marcos per monton. Some of these ores are now grinding at Sanchez, and we hope soon to have a torta of them in beneficio; this negotiation, including Carretaro, would appear to be more than paying costs. It is satisfactory to observe the continuation of the ores in the sixty eight vara level east of Terreros, which for the last ten or twelve varas has been better than it was generally before. We have also lately had some azogue ores in the same vein at the 100 vara level. We have some very good ores in the western end of the Acosta shaft, but the vein being hard in sinking it is necessarily slow. In the La Cruz winze, on the Santa Brigida vein, the bottom of which we have just reached, we find some good ores, with native silver, but, as much attle and mud remain to be cleared, we have not had a thorough examination of the vein. La Virgin shaft, according to measurement, has reached the level of the Avadero adit. I have commenced levelling of this work. We shall cut into the vein which now lies to the south of the shaft, and afterwards drive upon it west about twenty varas to reach the line of the adit, and thence drive north and south. There is reason to believe we shall have an increase of water on cutting the vein, which we hope will have the effect of lowering it faster than in Moran and other mines. The pressure engine works very well, and gives us no trouble, and will be capable of the drainage, even if the water should much increase from the proposed operations. The hindrances occasioned by the increase of water at Terreros shows the necessity of obtaining additional drainage power for the Biscaina vein. The estimate of costs and returns for February, shows costs (five weeks) . . . \$65,000  
Returns—forty-nine bars silver . . . 60,000  
Loss . . . \$ 5,000

#### IMPERIAL BRAZILIAN MINING ASSOCIATION.

**Gongo Soco, Feb. 8.**—After so long a period of poverty, it is highly gratifying to receive the dreary monotony of our late gold returns, by calling your attention to the account explaining the locality of the produce of yesterday, which could be washed up on that day, leaving 77 lbs. to be added to this day, which will, I expect, be conjointly with the remainder of the produce of yesterday, above quoted, 103 lbs. The rich bunches from which this produce has been obtained were rather suddenly cut at, late in the afternoon of yesterday, at Curtis's thirty-four and Hocheder's fourteen fathom levels, whence, but chiefly from the fourteen fathom level at Curtis's, six boxes of rich stuff were yesterday sent to the washing-house, two of which gave upwards of 38 lbs. of gold. This produce, although taken from old ground in the middle section of the mine, was not found, as it has often happened, in arches left from old workings, but in a branch split off from the south vein, at a distance which the range of the workings at that part of the mine in former days did not reach. The returns furnished of late by Goldsmith's stamps twice a week, for some weeks past, showed the favourable condition of this part of the mine, and where this rich bunch has been found, but I have heard from the Captain who met with it underground that there was nothing in the appearance of the vein within a few inches of the bunch which could indicate its presence.

Gold produce from 29th January to 7th February, 1840:—

Stamp. Total.  
Lb. oz. dwt. gr. Lb. oz. dwt. gr.  
Nine days workings . . . 16 5 1 0 . . . 46 6 10 12

Total, from 1st of January to 7th February . . . 90 7 2 0

**INTERESTING QUARRYING OPERATIONS.**—The operations on Killiney-hill, Dublin, have assumed a high degree of interest, in consequence of the steps taken for the removal of a portion of the cliff, which, being of a much harder quality than the rest of the rock, has hitherto been left untouched in the centre of the quarry. This mass, which projects considerably beyond the face of the cliffs at either side, is about seventy feet high, and nearly fifty feet thick, and the portion which it has been determined to detach weighs at least 50,000 tons. To affect the separation of this immense bulk of rock, two holes or drifts, as they are technically termed, of dimensions altogether unprecedented in any quarrying or mining operations attempted in Ireland, have been bored in it. One of these, fifteen feet in depth, and with a diameter of four inches, is driven backward from the principal face of the cliff; the other, of much greater dimensions, being twenty feet in depth, by five inches and a half in diameter, is driven laterally, and approaches the head of the former within a few feet. The charges for these immense bores amounted to nearly 200 lbs. of gunpowder. The experiment succeeded fully to the expectation of the mining engineers who planned it. A vast quantity of material fell with an awful crash, and volumes of dust enveloped the whole quarry for several minutes. Thousands of the citizens visited the scene by means of the Kingstown Railway, and many adventurous youths chose stations of great peril, the better to see the explosion. No accident whatever occurred.—*Dublin paper.*

#### ON THE PRODUCE AND CONSUMPTION OF COAL IN FRANCE.

In a late Number we extracted from an American periodical a statement of the quantity of anthracite raised within the past twenty-three years, showing the vast increase which had taken place in its use, and, consequently, having a very considerable effect on the manufactures of that country. A paper, drawn up by Mr. G. R. Porter, and which has also appeared in our columns, gives a similar statistical account of the produce and consumption of coal in France—the tables embodied in which afford additional evidence of the rapid progress made in other countries, as regards the development of their mineral resources, and the increasing application of a product, like that of coal, to the advancement of the manufacturing interests of foreign states.

It appears, from the tables to which we refer, that the increase in the value of coal, lignite, and anthracite, in four years, viz., comparing the year 1832 with that of 1836, was no less than 10,527,401 fr.; the produce raised in the former year being estimated at 16,079,670 fr., and the latter 26,607,071 fr.—being an increase of 65 per cent. It appears there are forty-six coal-fields in France, the principal of which are those of the Loire and the Nord, which alone yielded, in the year 1835, 1,344,519 tons. The total quantity of coal raised during that year from the several districts being 1,957,022 tons; the extent covered by the several establishments at work being estimated at 42,038 English acres.

From another table, which is submitted, it appears that the produce of coal, lignite, and anthracite, which was, in 1814, only 675,747 tons, had, in the year 1835, been increased to 2,583,587 tons, or an advance of 282 per cent. The whole number of mines in operation, in 1836, are described as follows:—189 coal, employing 19,813 workmen; 44 lignite, employing 1181; and 25 anthracite, giving employment to 919 persons. The following tables we extract at length:—

**Statement of the Quantity and Value of Coal, Lignite, and Anthracite raised in France, in each year, from 1814 to 1836:**

Yrs.	COAL.		LIGNITE.		ANTHRACITE.		TOTAL.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
1814.	636,835	2,251,112	23,985	29,161	5,689	21,824	666,510	2,272,097
1815.	715,276	2,424,824	23,300	11,608	6,738	1,985	745,311	2,437,417
1816.	764,785	3,224,848	23,304	11,239	4,728	1,546	792,017	3,237,632
1817.	815,229	3,424,976	27,340	16,068	4,672	1,579	847,141	3,442,613
1818.	723,471	3,137,794	29,600	14,562	5,018	2,110	758,089	3,154,463
1819.	761,850	3,335,318	44,113	11,846	5,937	4,371	811,900	3,352,526
1820.	871,980	3,701,144	43,977	19,344	7,438	5,827	923,395	3,726,315
1821.	913,213	3,955,771	39,122	19,344	6,676	5,499	958,011	3,971,510
1822.	950,899	4,004,842	46,603	21,316	8,229	5,773	1,005,732	4,031,931
1823.	950,642	4,044,846	40,194	22,399	9,313	4,567	1,000,149	4,071,752
1824.	1,065,016	4,355,695	41,032	19,897	13,222	6,481	1,119,370	4,381,074
1825.	1,176,838	4,624,698	59,242	25,008	23,374	9,915	1,259,454	4,659,611
1826.	1,217,982	5,220,812	68,116	29,201	14,969	5,922	1,301,067	5,255,943
1827.	1,344,432	5,571,130	57,808	35,214	25,481	12,180	1,427,721	5,604,523
1828.	1,408,239	5,695,733	64,329	28,764	29,647	14,569	1,492,215	5,748,065
1829.	1,577,136	5,995,847	59,719	27,767	32,512	16,884	1,669,367	5,999,498
1830.	1,477,513	5,882,118	64,348	24,590	30,761	16,221	1,572,622	5,722,989
1831.	1,493,124	5,449,432	52,513	19,723	30,631	16,739	1,576,478	5,485,891
1832.	1,549,636	6,009,289	69,177	22,314	38,398	20,483	1,657,211	6,051,181
1833.	1,633,776	6,724,908	58,274	26,150	45,180	23,288	1,737,230	6,773,344
1834.	1,962,083	7,489,946	58,064	31,166	59,987	30,716	2,020,130	7,551,829
1835.	1,987,022	7,985,281	60,598	39,433	57,003	32,582	2,104,623	8,017,296
1836.	2,394,799	1,090,018	96,249	36,514	84,795	27,751	2,544,843	1,094,283

During the years embraced in the foregoing table, the use of coal in France was increased in a greater degree than the productiveness of the mines, as will be shown from the following statement of the quantity imported for consumption, from 1815 to 1836, inclusive:—

Years.	Tons.	Years.	Tons.
1815	245,653	1826	495,325
1816	315,815	1827	531,800
1817	235,269	1828	570,010
1818	277,624	1829	539,247
1819	234,102	1830	621,459
1820	276,705	1831	533,259
1821	315,785	1832	567,251
1822	332,192	1833	686,116
1823	321,497	1834	730,281
1824	456,644	1835	755,365
1825	499,325	1836	949,373

The very considerable increase in the last few years, in addition to the coal raised from the mines of France, thus shows an advance, in little more than three years, of full 50 per cent., the increased productiveness of the mines having kept pace with the imports.

#### NOTES ON A JOURNEY FROM SAUCEDA, NEAR ZACATECAS, IN MEXICO, TO THE MINING DISTRICT OF CATORCE.

BY MAJOR CHARTERS, R.A.

[From a Paper read at a late meeting of the "Royal Geographical Society."] Journeying in an east direction for forty miles, over a barren plain, when a few stunted palms and the cacti are the only traces of vegetable life, the traveller reaches the mining town of Ramos. The mines here are in one principal vein; there are eight shafts, the deepest 390 yards, and consist of argilliferous copper pyrites and copper glance, chiefly in clay slate, with surface coating twelve yards thick of compact lava; this covers a small extent of country around Ramos, of which the volcanic hill of Zamora, half a mile to the south-east, would seem to have been the centre. There are two other hills of the same nature near Ramos, one of which, to the east-north-east, is named La Cantera, from the building material thence obtained. It is worthy of remark that the volcanic mass covers the metalliferous veins, which has been worked to a considerable depth—the plain between Saucedo and Ramos is covered with a thin deposit of calcareous tufa, which, in the dry season, is easily reduced to powder, and is very disagreeable to the traveller. Major Charters had remarked a similar calcareous deposit in many parts of the South African plains, and asks what may be the origin of these widely extended deposits far removed from any mountain of a similar nature. From Ramos the road turns north-east to Cornejo, at ten leagues distant, a few huts on the edge of a freshwater lake, about two miles long, which has neither inlet nor outlet; the water is extremely good, and a valuable treasure on these arid plains. The same calcareous deposit extends thus far, and here covers a beautiful breccia. Continuing in the same direction, the traveller passes the lone house called San Juan de Tusil, near the base of Mount Venado; then the farm of Mingale, and some leagues beyond the gorge in a mountain ridge, called El Puerto de Mingale, on descending from which, the whole range of the Catorce group becomes visible in the distance. Seven leagues farther over the plain brings you to the small town of Catorce, situated at the foot of the mountains, while higher up, at an elevation of 8575 feet above the sea, is the mining town of Real de los Alamos, containing 10,000 inhabitants. This group of mountains so far resembles that of Zacatecas, that it is unconnected with any other range, and rises directly from the surrounding plains, and this seems to be the distinguishing character of the metalliferous mountains of Mexico, with the exception of Bolanos, which belongs to an extensive chain. It is, however, unlike the Zacatecas group, both in external appearance and formation; it is on a much bolder scale, and some sections of the limestone strata are here extremely magnificent. The mineral wealth which has been produced by it has been very great, so much so as to give it the third if not the second rank amongst the mineral districts of Mexico. The limestone, which forms the principal character of this group, appears to rest on clay slate, and the miners have taken full advantage as well of its deep ravines as of the nature of the rock to drain great adits; that of the principal mine, called La Luz, is six miles high, six wide, and 1100 yards in length, and cost about 30,000l.; the principal workings are above this, so that the stuff is let down from above, and carried out in horse carts at a brisk trot through the adit. In this group of mountains there is also a volcanic mountain, similar in appearance to that of Ramos, although on a larger scale than the Zamora.

**EXTRAORDINARY PERFORMANCE.**—In the course of last week, Mr. Eliepeck, foreman of the smiths' works in the granary yard, in Whitehaven, belonging to the Earl of Lonsdale, with the aid of engine machinery, bored through not less than sixteen feet three inches of malleable iron in the short space of ten hours, with a bit one inch and a quarter in diameter. The weight of a boring, when collected together, was not less than 36 lbs. This Herculean performance, we understand, has seldom been equalled. If, indeed, it be not altogether without a parallel, in undertakings of a similar nature and description.—*Carlisle Patriot.*

**NEW FUEL.**—The Rev. Mr. Cobbold has invented a fuel composed of peat and the common refuse of gas-tar, which burns with a bright flame, little or no smoke, and gives out an intense heat. It has no smell whatever, and has been tried in a grate, in comparison with coal. According to this experiment, which was made by a chemist, but without weighing the fuel, two quarts of water were evaporated in thirty-five minutes, leaving a good fire afterwards; while with Newcastle coal it took fifty minutes, leaving a low burnt-out fire. Mr. Cobbold says he can render this fuel at 7s. per ton.



## EXPORTS OF BRITISH AND FOREIGN METALS

FROM LONDON AND LIVERPOOL, FROM THE 1ST TO THE 31ST MARCH.

	British.	Foreign.	Total.
Iron . . . . . Tons	9,589	383	9,972
Steel . . . . . Tons	74	41	115
Copper . . . . . Tons	121	160	281
Sheets . . . . . Tons	845	—	845
Tin . . . . . Tons	65	39	105
Tin-plates . . . . . Boxes	19,829	—	19,829
Lead . . . . . Tons	224	482	706
Spelter . . . . . Tons	—	213	213
Quicksilver . . . . . Lbs.	80,242	—	80,242

## IRON AND COAL

Sent down the Glamorganshire Canal during the year ending Dec. 31, 1839.

IRON.	Tons.	COAL.	Tons.
Dowlais Iron Co. . . . .	40,495	Thomas Powell and Co. . . . .	34,541
W. Crawshaw . . . . .	37,009	Thomas Powell . . . . .	37,096
H. and A. Hill . . . . .	15,762	Walter Coffin . . . . .	51,100
Poydarran Iron Co. . . . .	15,540	George Isdale . . . . .	23,444
Aberdare Iron Co. . . . .	11,307	Lucy Thomas . . . . .	17,097
H. Blakemore and Co. . . . .	3,304	Morgan Thomas . . . . .	14,924
Taff Vale Iron Co. . . . .	4,946	John Edmunds . . . . .	14,073
Brown, Lennox, and Co. . . . .	4,037	Duncan and Co. . . . .	13,386
Gadlys Iron Co. . . . .	1,081	D. and D. Davies . . . . .	8,976
		Evan Evans . . . . .	2,902
		Aberdare Coal Co. . . . .	3,373
Total . . . . .	132,781	Total . . . . .	211,214

**THE SULPHUR QUESTION.**—The *Sud* of Marseilles contains the following from Naples, under date of the 14th:—"Every hope of arrangement between the King of Naples and England has been given up. The English vessels are expected to arrive every minute. Preparations for defence are carried on with renewed activity, and fresh supplies of troops are daily made to Sicily. Every precaution has been taken for the security and defence of Naples." Other letters, however, received from Naples by an eminent commercial house in the City, positively mention that the King had yielded all the essential points regarding the sulphur contract, and though some minor points remained for adjustment, no further difficulty was anticipated.

**PRICES OF SHARES IN LIVERPOOL.**—Eastern Counties Railway, 10s. 5s.; Great Western 82s. 10s.; ditto, new shares, 37s. 15s.; London and Birmingham, 165s.; ditto, new shares, 46s. 10s.; London and South-Western, 46s. 5s.; Midland Counties, 95s. 10s.; North Midland, 104s.; new shares, 24s.; North Union (late Preston and Wigan), 84s. 10s.; Albion Bank, 21s. 17s. 6d.; Borough Bank, 14s. 17s. 6d.; Liverpool Union Bank, 12s. 12s. 6d.; Manchester and Liverpool District, 9s. 15s. —*Gore's Liverpool Advertiser.*

**PRICES OF SHARES IN BIRMINGHAM.**—London and Birmingham Railway, 168s.; ditto, quarter shares, 27s.; ditto, 32s. shares, 47s.; Manchester and Birmingham, 15s. 10s.; Great Western, 81s.; ditto, half-shares, 37s. 10s.; Birmingham and Derby, 83s.; Birmingham and Gloucester, 69s.; Midland Counties, 73s.; North Midland, 104s.; Manchester and Leeds, 81s.; London and South-Western, 46s.; London and Croydon, 10s.; Eastern Counties, 7s.; Bristol and Exeter, 16s.; London and Greenwich, 10s.; London and Brighton, 26s.—Grand Junction Canal, 13s.—Birmingham Plate and Crown Glass, 5s.—*Midland Counties Hid.*

**BELGIUM, APRIL 20.**—There has been another meeting of the creditors of the great house of Cockeril. The balance-sheet presented exhibits some improvement in the position and progress of realization of the assets of the concern, to the extent, indeed, of an increase in the action funds of 1,250,000 francs. The whole debits are stated at 17,227,886 francs, and the credits, comprising stock, fixed property, and book debts and capital, at 26,537,741 francs. The rumour is again revived that the great establishment at Seraing was about to be purchased by Russia. Altogether the house has seven establishments for various branches of industry engaged in—viz., at Seraing, Liege, Aix la Chapelle, Ardenne, Brussels, St. Dennis, and Gottbus. The inventory of value of the property at Seraing alone is estimated at 6,065,000 francs, and that of Liege at 3,055,000 francs. It was supposed that the license for carrying the concern on under inspection would be renewed.

**BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.**—The Glasgow committee of the "British Association for the Advancement of Science," are making preparations on an extensive scale, for rendering the ensuing annual meeting of that association one of the most interesting description. The committee appointed for the purpose of forming a museum of minerals, found in the west of Scotland, have procured the valuable assistance of Mr. John Craig, mineral surveyor, Glasgow; and he is at present collecting information for the formation of a geological map of the coal basin of the Clyde and adjoining districts, and also specimens illustrative of the strata and organic remains. Mr. Craig has, in the course of his survey, visited our neighbourhood, and has been successful in procuring a vast number of beautiful and rare specimens of animal and vegetable remains, besides simple minerals. In the railway cut, Devols Glen, near Port Glasgow, he found a bed of shells forty-two feet above the level of the sea, in which he discovered one shell, which belongs to a species of shell-fish, now only found at the Straits of Magellan. In the Gourack whinstone quarry, after a minute and attentive search, he succeeded in finding some splendid specimens of fluor spar, apatite, and other rare crystallisations, which, when shown and described at the meetings of the association, will, we have no doubt, induce many of the members and strangers from a distance to visit the sea-bathing village of Gourack in quest of rare minerals.

**THE SULPHUR MONOPOLY.**—The effect of the monopoly established by that Monarch of Volcanoes and Lord of Solfaterras, the King of the Two Sicilies, in the article of sulphur, has been to stimulate ingenuity to find a substitute, and as usual the monopoly, even if it should not be put down by the remonstrances of the British and French Governments, is likely to prove much less profitable than was expected. In this country the extravagant price of sulphur has brought pyrites into great demand, especially in the extensive chemical works at St. Helen's and Runcorn, and it is said that even if the price of sulphur should fall, large quantities of that article would continue to be used.—*Chester Chronicle.*

**SAWN SLATE PAVEMENT.**—Experiments have been made to ascertain the applicability of slate to other uses than the covering of houses. The result has been the discovery that, as a material for paving the floors of warehouses, cellars, wash-houses, barns, &c., where great strength and durability are required, it is far superior to any known material. In the extensive warehouses of the London Docks it has been used on a large scale. The stones forming several of the old floors having become broken and decayed, have been replaced with slate two inches thick, and one wooden floor, which otherwise must have been relaid, has been cased with slate one inch thick, and the whole has been found to answer very completely. The trucks used in removing the heaviest weights are worked with fewer hands. The slabs being sawn, and cemented closely together, as they are laid down, unite so perfectly that the molasses, oil, turpentine, or other commodity which is split upon the floor, is all saved; and as slate is non-absorbent, is so easily cleaned, and dries so soon, that a floor upon which sugar in a moist condition has been placed, may be ready for the reception of the most delicate goods in a few hours. Waggoners or two-wheeled carts without making the slightest impression. In no one instance has it been found that a floor made of sawn slate has given way; in point of durability, therefore, it may be considered superior to every other commodity applied to such uses. The consequences of this discovery have been, that full employment is found in the quarries which produce the slates, and that additional employment has been given to the British shipping engaged in the coasting trade.

**NORTH MIDLAND RAILWAY.**—The directors have announced their intention to open this line on the 4th of May, from Sheffield to Derby—a distance of about forty miles—where a communication will be effected with the railways already opened direct to the metropolis.

## GOLD AND SILVER.

Foreign Gold in Bars (standard) . . . . .	per oz. 37 9
Foreign Gold in Coins, Spanish Doubloons . . . . .	6 8
New Dollars . . . . .	6 8
20 Franc pieces . . . . .	6 8 10
Silver in Bars (standard) . . . . .	0 8 0

## PURCHASES OF BLACK TIN AT TRELOWETH,

APRIL 14.

Purchaser.	Mins.	Tons.	Total.	Price.	Amount.	Total Amount.
L. C. and W. DAWSON.	Tincroft . . . . .	11	44 10 0	480 10 0	480 10 0	480 10 0
	Bowdman . . . . .	24	44 10 0	115 2 6	115 2 6	115 2 6
			178			602 12 6
GREENFELL & CO.	Tincroft . . . . .	4	38 0 0	18 0 0	18 0 0	18 0 0
	Levant . . . . .	22	41 12 6	93 13 1	93 13 1	111 13 1
BATTEN & SON	Charlestown U. M. Great Work . . . . .	20	45 0 0	933 15 0	933 15 0	933 15 0
	Parknoweth . . . . .	24	48 0 0	108 0 0	108 0 0	239 0 0
BOLITHOS and Co.	Wheal Mary . . . . .	14	44 15 0	435 2 6	435 2 6	435 2 6
	Wheal Olis . . . . .	34	48 17 6	298 16 3	298 16 3	298 16 3
	Wheal Reeth . . . . .	4	44 0 0	194 10 0	194 10 0	194 10 0
	Boscowan . . . . .	6	40 0 0	275 0 0	275 0 0	275 0 0
	Carzise . . . . .	6	40 0 0	275 15 0	275 15 0	275 15 0
	Bowdman . . . . .	22	45 0 0	124 0 0	124 0 0	124 0 0
	Levant . . . . .	42	41 13 6	197 14 0	197 14 0	197 14 0
	Rosewall Hill . . . . .	24	45 12 6	109 13 0	109 13 0	109 13 0
WILLIAMS and Co.	Charlestown U. M. Great Work . . . . .	64	48 12 6	283 11 3	283 11 3	283 11 3
	Wheal Olis . . . . .	4	48 12 6	268 16 3	268 16 3	268 16 3
	Wheal Reeth . . . . .	64	44 0 0	375 0 0	375 0 0	375 0 0
	Boscowan . . . . .	6	40 0 0	294 15 0	294 15 0	294 15 0
	Carzise . . . . .	6	40 12 6	275 15 0	275 15 0	275 15 0
	Bowdman . . . . .	22	45 0 0	124 0 0	124 0 0	124 0 0
	Rosewall Hill . . . . .	24	45 12 6	109 13 0	109 13 0	109 13 0
	Wheal Mary . . . . .	14	44 15 0	435 2 6	435 2 6	435 2 6
TRAUB SMELTING CO.	St. Ives Consols . . . . .	21	44 0 0	1012 0 0	1012 0 0	1012 0 0
	Wheal Mary . . . . .	42	44 15 0	947 12 6	947 12 6	947 12 6
	Boscowan . . . . .	22	46 17 6	1081 5 0	1081 5 0	1081 5 0
	Balteswidden . . . . .	104	45 10 0	720 15 0	720 15 0	720 15 0
	Tincroft . . . . .	92	46 0 0	233 5 0	233 5 0	233 5 0
			254			4170 5 0
						11,844 1 3

## PURCHASES OF COPPER ORES AT SWANSEA,

APRIL 15.

Purchaser.	Mins.	Tons.	Total.	Price.	Amount.	Total Amount.
1. ENGLISH CO.	Cobres . . . . .	63	23 9 6	1478 18 6	1478 18 6	1478 18 6
	Chil . . . . .	40	24 10 6	1128 3 0	1128 3 0	1128 3 0
	Chil . . . . .	26	20 7 6	829 15 0	829 15 0	829 15 0
	Chil . . . . .	90	25 5 6	2094 15 0	2094 15 0	2094 15 0
2. FREEMAN and Co.	Lackmore . . . . .	66	6 10 6	—	—	430 13 0
3. GREENFELL and Co.	Chil . . . . .	384	16 0 6	636 4 3	636 4 3	636 4 3
	Ballymartagh . . . . .	81	2 10 0	234 18 0	234 18 0	234 18 0
	Chil . . . . .	54	2 13 6	149 17 6	149 17 6	149 17 6
	Chil . . . . .	40	2 12 6	105 0 0	105 0 0	105 0 0
	Valparaiso . . . . .	45	18 12 6	828 2 6	828 2 6	828 2 6
	Lacey . . . . .	68	2 1 6	141 2 0	141 2 0	141 2 0
4. CROWN CO.	Cobres . . . . .	61	20 19 6	—	—	1279 0 6
5. SIMS, WILLIAMS, and Co.	Santiago . . . . .	554	15 3 0	840 16 6	840 16 6	840 16 6
	Chil . . . . .	110	15 3 0	1650 4 0	1650 4 0	1650 4 0
	Chil . . . . .	95	20 14 6	1909 12 0	1909 12 0	1909 12 0
	Chil . . . . .	94	21 3 0	1990 9 0	1990 9 0	1990 9 0
	Chil . . . . .	82	15 3 0	1252 11 6	1252 11 6	1252 11 6
	Knockmahon . . . . .	454	7 3 0	329 17 6	329 17 6	329 17 6
	Cobres . . . . .	60	12 3 0	730 10 0	730 10 0	730 10 0
	Chil . . . . .	43	12 7 0	531 1 0	531 1 0	531 1 0
6. VIVIAN and Sons.	Santiago . . . . .	554	15 3 0	840 16 6	840 16 6	840 16 6
	Chil . . . . .	106	14 14 6	1358 4 0	1358 4 0	1358 4 0
	Chil . . . . .	105	15 3 0	1601 5 0	1601 5 0	1601 5 0
	Chil . . . . .	123	6 0 0	768 15 0	768 15 0	768 15 0
	Cobres . . . . .	21	12 11 0	389 1 0	389 1 0	389 1 0
	Chil . . . . .	38	21 3 0	799 18 0	799 18 0	799 18 0
	Chil . . . . .	22	12 15 0	280 10 0	280 10 0	280 10 0
	Alibies . . . . .	99	8 2 0	801 18 0	801 18 0	801 18 0
	Chil . . . . .	104	16 5 0	1625 0 0	1625 0 0	1625 0 0
	Chil . . . . .	16	56 1 0	670 16 0	670 16 0	670 16 0
	Cronelane . . . . .	37	5 3 0	190 11 0	190 11 0	190 11 0
7. WILLIAMS, FOSTER & Co.	Santiago . . . . .	81	15 3 0	1257 5 6	1257 5 6	1257 5 6
	Knockmahon . . . . .	116	5 10 6	640 18 0	640 18 0	640 18 0
	Chil . . . . .	105	7 10 6	799 2 6	799 2 6	799 2 6
	Chil . . . . .	105	8 12 6	903 0 0	903 0 0	903 0 0
	Cobres . . . . .	104	5 15 0	598 0 0	598 0 0	598 0 0
	Chil . . . . .	77	18 6 0	169 2 0	169 2 0	169 2 0
	Chil . . . . .	70	17 14 6	1229 0 0	1229 0 0	1229 0 0
	Chil . . . . .	90	21 3 0	1094 0 0	1094 0 0	1094 0 0
	Alibies . . . . .	123	8 9 6	1042 8 0	1042 8 0	1042 8 0
	Chil . . . . .	115	8 1 0	928 15 0	928 15 0	928 15 0
	Chil . . . . .	85	8 2 0	430 12 6	430 12 6	430 12 6
	Chil . . . . .	384	16 10 6	635 4 0	635 4 0	635 4 0
	Chil . . . . .	67	16 9 0	1102 3 0	1102 3 0	1102 3 0
	Valparaiso . . . . .	31	21 14 6	641 14 0	641 14 0	641 14 0
	Lackmore . . . . .	45	18 12 6	835 2 6	835 2 6	835 2 6
	Tignory . . . . .	14	12 6 0	172 11 0	172 11 0	172 11 0
	Ballygahan . . . . .	23	18 6 0	90 5 6	90 5 6	90 5 6
	Ballygahan . . . . .	59	1 12 6	95 17 6	95 17 6	95 17 6
VIVIAN & Co.	Knockmahon . . . . .	98	8 10 0	803 0 0	803 0 0	803 0 0
	Chil . . . . .	454	7 3 0	329 17 6	329 17 6	329 17 6
	Alibies . . . . .	59	7 16 6	539 18 6	539 18 6	539 18 6
			212			1792 16 0
			3857			4556 4 0

## SALE OF COPPER ORES AT REDRUTH.

Sampled April 8, and sold at Andrew's Hotel, Redruth, April 23.

Mins.	Tons.	Price.	Purchaser.	Mins.	Tons.	Price.	Purchaser.
Trevelan 104 . . . . .	7 3 6.	Williams.	Trevelan 53 . . . . .	4 3 6.	English Co.		
ditto 99 . . . . .	4 10 6.	P. Grenfell.	Levant 75 . . . . .	5 2 6.	Williams.		
ditto 87 . . . . .	3 5 6.	—	ditto 74 . . . . .	13 11 6.	Neill & Co.		
ditto 81 . . . . .	7 15 6.	—	ditto 70 . . . . .	7 18 6.	Vivians.		
ditto 78 . . . . .	8 10 0.	—	Duffield M. 91 . . . . .	6 16 6.	Freemans.		
ditto 71 . . . . .	3 18 6.	—	ditto 68 . . . . .	13 15 6.	—		
ditto 67 . . . . .	8 18 0.	—	ditto 26 . . . . .	3 12 6.	Vivians.		
ditto 64 . . . . .	4 4 0.	—	ditto 22 . . . . .	6 0 0.	Freemans.		
ditto 51 . . . . .	3 10 6.	—	Trevelan 82 . . . . .	5 11 0.	Williams.		
Fowey C. 109 . . . . .	5 9 6.	Freemans.	ditto 46 . . . . .	7 17 6.	Vivians.		
ditto 107 . . . . .	4 13 6.	—	E. Crispin 118 . . . . .	5 18 6.	P. Grenfell.		
ditto 73 . . . . .	4 7 0.	—	N. Downe 70 . . . . .	4 6 6.	Mines Royal.		
ditto 70 . . . . .	5 0 6.	Neill & Co. W. Gorland 68 . . . . .	5 11 0.	P. Grenfell.			
Trevelan 99 . . . . .	3 16 6.	Vivians.	Pembroke 40 . . . . .	4 0 0.	Freemans.		
ditto 66 . . . . .	4 10 0.	—	E. Relistian 16 . . . . .	4 14 6.	Vivians.		

## TOTAL PRODUCE.

Trevelan . . . . .	799	£4315 9 6	East Crispin . . . . .	118	£440 14 0
Fowey Consols . . . . .	209	1765 12 6	North Downe . . . . .	70	302 15 0
Trevelan . . . . .	329	909 0 0	West Gorland . . . . .	68	377 0 0
Levant . . . . .	319	2156 17 0	Pembroke . . . . .	40	160 0 0
Duffield Mines . . . . .	95	1794 9 0	East Reistian . . . . .	18	77 4 0
Stettol . . . . .	130	819 18 0			

Average standard, 1466 lbs.—Average produce, 84.—Average price, 6s. 6d.—Quantity of ore, 21,485 tons.—Quantity of copper, 177 tons 12 cwt.—Amount of money, £47,741 10s.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of copper, 17s. 6d.—Average value of money, 10s. 6d.—Average value of ore, 14s. 6d.—Average value of 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JOINT STOCK BANKS						
No. of Shares.	NAME OF COMPANY.	Amount of Shares	Amount paid.	Price.	Value	Profit or Loss.
					per share	per share
25,000	Agrie. & Com. of Irei.	25	10	..	..	..
10,000	Australasia .....	40	40	58	9	Jan
5,000	Ditto (New) .....	40	10	29	..	..
1,500,000	Bank of Scotland ..	10	653	78	6	Oct
10,000	Birmingham Bank ..	50	10	123	10	Dec
50,000	British Bank .....	100	100	..	..	..
20,000	British North Amer. ..	50	80	32	8	Mar
100,000	Commercial .....	5	5	54	7	..
20,000	Colonial .....	100	25	32	6	..
5,000	Devon and Cornwall ..	100	25	43	8	..
5,000	Equitable Loan Co. ..	..	9	10	..	..
10,000	Gloucestershire .....	50	10	30	10	Feb
6,000	Hampshire .....	50	5	..	..	Aug
10,000	Hibernian .....	100	25	21	4	..
4,000	Ionian State .....	25	5	34	..	..
20,000	London & Westmins. ..	100	39	28	6	Mar
5,000	Lancaster .....	100	10	..	..	..
25,000	Liverpool .....	100	123	21	10	Jul
60,000	Land Joint Stock Co. ..	50	10	124	5	..
40,000	London & County .....	50	10	9	5	Mar
80,000	Manch. & Liver. Dis. ..	100	15	93	..	..
20,000	Manchester .....	100	25	27	74	Oct
25,000	Monm. & Glamorg. ..	10	16	10	..	..

20,000	North & South Wales	10	5	100	6	—
20,000	Natl. Bank of Ireland	50	17	16	6	—
10,000	Nat. Provincial. Eng.	100	35	35	5	Jan
10,000	Ditto New	20	10	100	5	—
50,000	Nor.&Cent. B. of Eng.	10	10	5	—	Dec
10,000	North Wils. ....	25	5	100	5	—
20,000	Prov. Bk. of Ireland	160	25	44	8	Jan
4,000	Ditto New	10	10	17	8	—
7,000	South African	—	—	5	—	—
60,000	Union B. of London	50	5	5	—	—
10,000	Union of Australia	25	17	26	—	—

20,000 Wills and Dorset ..				15	74	84	6	—
GAS LIGHT AND COKE COMPANY								
10,000 Alliance ..	10	5	—	7	—	—	—	—
2,000 Bath ..	20	16	22	1	—	—	—	Sept
600 Bradford ..	25	25	—	—	—	—	—	—
5,000 British ..	40	18	19	—	—	—	—	Nov
5,000 Do. Provincial ..	20	19	25	11	—	—	—	Nov
928 Birmingham ..	77	77	93	—	—	—	—	July
2,400 Birm. & Staffordshire ..	50	50	73	4	—	—	—	Apr
600 Brentford ..	50	50	18	4	—	—	—	Apr
4,250 Bristol ..	20	20	36	2	—	—	—	Feb
1,500 Brighton ..	30	20	11	34	—	—	—	Sept
750 Do. New ..	20	—	—	94	—	—	—	Nov
2,471 Brighton, General ..	20	20	91	—	—	—	—	Nov
263 Carlisle ..	25	—	—	—	—	—	—	—
7,000 Continental Consolidated ..	50	652	110	64	—	—	—	July
7,000 Do. New ..	50	10	24	—	—	—	—	—
240 Canterbury ..	50	50	55	6	—	—	—	Jan
700 Chelmsford ..	50	50	42	4	—	—	—	—
300 Cheltenham ..	50	50	75	8	—	—	—	Oct
1,000 City of London ..	100	100	195	10	—	—	—	—
1,000 Do. New ..	100	—	14	10	—	—	—	—
800 Coventry ..	25	25	24	—	—	—	—	—
200 Derby ..	50	50	—	—	—	—	—	—
180 Dover ..	50	50	—	—	—	—	—	—
600 Dudley ..	20	20	17	5	—	—	—	—
4,500 Edinburgh Coal Gas ..	25	25	—	—	—	—	—	—
Edinburgh and Alloa ..	—	14	—	—	—	—	—	—
240 Exeter ..	50	50	—	—	—	—	—	—
4,000 Exmouth ..	20	—	36	3	—	—	—	June
10,000 European ..	20	15	—	—	—	—	—	Aug
4,450 Glasgow ..	25	25	54	10	—	—	—	—
20,000 Greenwich Railw. Gas ..	—	1	—	—	—	—	—	—

5,000	Do. Bonds	100	100	98	4	
1,200	Ipswich		10		4	
800	Isle of Thanet	35	20	18	5	
2,350	Independent	20	30	50	6	Oct.
240	Leicester	30	50			
780	London Gas	20	20		17	
500	Liverpool	25	25		17	
	Do. N. Gas and Coke	100	100	97		
	Do. (New Do.)					
200	Maldstone	50	50	100	10	Feb.
9,000	Phoenix	50	39	31	4	
579	Portsea		53			
3,000	Reading	50	50			
1,000	Ratcliff	80	80	60		Nov.

480	Kochs	—	12	—	—
4,000	South Metropolitan	50	22	19	4 July
1,600	Shemeld	—	22	—	—
1,000	Shrewsbury	—	16	—	—
120	Swansea	40	50	—	—
200	United General	50	46	324	3 Jan.
240	Warrick	50	50	50	5 Jan.
400	Wakenfield	25	25	229	14 Jan.
750	Warrington	20	20	20	1 Oct.
500	Westminster Chartered	50	50	564	5 Dec.
1,000	Ditto New	50	10	11	128 Dec.
200	Worthing	50	80	—	4 Aug.

DOCKS.					
90,1063 Commercial .....	100	100	68	3	July
East and West India .....	100	100	103	..	Jan.
1,038 East County .....	100	100	10	..	Dec.
53,8,104 Ss. 10 London .....	..	..	68	3	Jan.
Ditto Bonds .....	..	..	100	4	..
2,209 Bristol .....	147	147	74	4	Dec.
68,374 Ditto Notes .....	..	..	108	5	Nov.
579 Folkestone Harbour .....	50	50	..	..	..
15,000 Ditto Bonds .....	..	..	5	..	..
11,000 Grand Collier Docks .....	50	1	1	..	..
532,732 St. Katharine .....	100	100	104	5	Jan.
00,000 Ditto Bonds .....	..	..	101	44	Oct.

2,500 Deptford Pier .....	30	3	11	—
7,000 Southampton .....	30	13	#	—

BRIDGES.				
5,600 Hammersmith.....	50	50	22	1 Jan
2,281 Southwark w. new sub.	634	634	24	—
Do. New of 7 per cent.	50	50	13	11 Dec.
648 Vauxhall .....	704	704	23	19a Dec.
100 Waterloo .....	100	100	3	—
Do. old Annandale of st.	60	60	21	23 Feb.
Do. new do. of 71 .....	40	40	18	19a Feb.
Diff'd Bonds .....	—	—	120	3

WATER WORKS.				
600 Birmingham .....	23	23	20	10a —
21 Colchester .....	100	100	—	—
253 East London .....	180	180	164	7 Jan
600 Glasgow .....	36	36	—	—
300 Grand Junction .....	464	417	66	24 Jan
400 Edinburgh Joint Stock	23	23	41	—
200 Kent .....	120	120	41	Jan

22	Liverpool Bootle .....	220	220	327	19	24	Oct.
23	New River London Bridge	20	20	30	24	24	Oct.
24	W. London .....	100	100	30	24	24	Oct.
25	Manchester & Salford ..	100	100	31	22	22	Oct.
26	Portsea Island .....	20	20	30	24	24	Oct.
27	Portsmouth & Farington ..	50	50	21	1	1	Oct.
28	Ramsgate .....	10	10	10	1	1	Oct.
29	Vauxhall, late So. Lond. ....	100	100	100	4	4	Oct.
30	West Middlesex .....	632	632	163	4	4	Oct.
31	York Building Co. L. P. ....	100	100	30	17	17	Oct.

### ROADS.

323	Archw. and Kent Im. ....	30	30	24	1	1	Oct.
324	Barking .....	100	100	22	1	1	Oct.
325	Commercial .....	100	100	7	3	3	Oct.
326	Do. East India Dock Br. ....	100	100	7	3	3	Oct.
327	Great Dover Str. ....	70	70	2	1	1	Oct.
328	Highgate .....	305	305	2	1	1	Oct.
329	New North Rd. Stock ....	100	100	2	1	1	Oct.

### LITERARY INSTITUTIONS.

330	Anderson's Gal. of Science ..	75	75	10	1	1	Oct.
331	London, W. Bronze Tick. ....	75	75	10	1	1	Oct.

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